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SEASONABLE HINTS.

Now is the time for farmers to form their plans for the coming season—the time for them to *think*. Somebody has said that the power of thinking is what distinguishes the farmer from his ox. However that may be, the farmer now has time to think about how he can employ the means and force at his command to the best advantage for the next crops. He should not only think, but he should study carefully his agricultural papers, and get the opinion of his neighbors—perhaps combine with them for raising certain crops, or other purposes. The present circumstances are in many respects new. The farmer will have to do with less help than has heretofore been at his command, and will have to pay higher prices for the help he hires. He will have to pay high prices for about everything he buys, and his taxes will be much increased.

On the other hand, there is an increased demand with higher prices for many of the great staples which he produces. Several crops not hitherto generally cultivated have acquired new importance and are capable of bringing to the producer unusually large profits. To meet these new circumstances—contend in the best manner with the disadvantages, and avail ourselves of the advantages offered—demand more than ever careful study and inquiry in forming our plans and energy in executing them. Such a course is demanded not less by selfish interest than by pure patriotism. The country has a right now to expect every citizen to do his best, whether in the field of the producer or in the field of battle. In indicating plans for the future, we would mention first the importance of

High Culture.—Poor farming was always comparatively unprofitable. It is much more so now. To plant a large number of acres in order to raise a large number of bushels has been a very common error. Twenty acres of land poorly plowed and poorly cultivated will require much more labor, and often not yield as much as half the quantity deeply and thoroughly plowed, well cultivated and manured. Such statements have often been made, but the importance of their consideration at this time warrants a reiteration. Let every farmer carefully calculate how much he can cultivate thoroughly, and attempt no more. Let him use every spoonful of manure at his command, so that he may get the largest possible yield from the land he cultivates, and he will thus secure the best return for the labor he employs. Let the present comparatively leisure time be used in hauling out all the old manure heaps upon the land designed for the spring crops, or upon the meadows if they need it.

Sheep.—An article published in the *Valley*

Farmer, about a year ago, recommended sheep husbandry as a means of producing large profits with comparatively little labor, and therefore adapted to the circumstances of the times. Those who have early engaged in the business have now no reason to regret it, as sheep are in demand at high prices, and will bring their owners large profits the coming season. Many farmers who lack help will do well to put more of their land in grass. Hay will continue to bring a good price while the war lasts. Grazing sheep will continue highly profitable, and grazing cattle will pay well, especially if butter and cheese can be made.

Tobacco.—This crop has become one of great interest so far as profit is concerned. It requires, however, a good deal of labor, and will be utterly ruined by the worm and other causes if neglected. It also requires experience for its successful management, and a large outlay for buildings, unless they are already at hand.

Sorghum.—This has become an important and highly remunerative crop. The Premium Essay which is given to all subscribers of the *Valley Farmer* will fully post them up in regard to it.

Flax.—This is another crop which has of late become more than ever very important and remunerative, both the seed and the straw being in demand at high prices. The demand is likely to increase rather than diminish. Much attention is being given to improvements in preparing and manufacturing the fibre throughout the East and West. Machines are sent out from Chicago along the lines of Railroads where quantities of flax straw can be found, to dress it out and prepare it for market. Farmers may rely upon it that all the flax straw they can produce will be in demand at a good price. The crop is easily raised. It is not necessary to pull it by hand, it may be cut with a scythe or reaper. It is important to sow it on land as free from weeds as possible. Sow not less than one bushel nor over two bushels to the acre to produce a good yield of both seed and straw.

Cotton.—In Southern Illinois the culture of cotton the past season was found quite profitable. There is no doubt that with present prices—and of course they will not be much diminished this year—the raising of cotton south of latitude 39° will be quite profitable. From fifty dollars to one hundred and fifty dollars per acre may unquestionably be realized from cotton growing the coming season.

White Beans.—The bean crop is now quite remunerative. They are worth at this time in St. Louis from $2.30 to $2.50 per bushel; and the price will continue high while the demand for the army continues. The small navy bean has generally had the preference, but there are those who think the larger varieties, as white marrow and kidney, more certain and profitable. They are certainly better beans, and bring a little higher price in Eastern markets.

Field Peas.—This is a crop which has been too much neglected by our Western farmers. It is a crop very easily raised, and yields a large amount of excellent grain for fattening hogs or feeding to sheep in winter. It is also an admirable fallow crop far preparing the ground for fall wheat. They should be sown broadcast as early in the spring as the ground can be put in good condition. When ripe, the hogs may be turned into the field, or the vines may be gathered with a rake or scythe and thrown to the hogs, or may be stacked or threshed and kept for future use.

Although farmers now labor under some disadvantages, and will not be able, probably, to cultivate as much ground as heretofore, there are many things in their favor, and they will, with good management, be able to realize more money from their farms than usual. We repeat, then, now is the time to *think* about what can be done to best advantage. Let every resource be husbanded, every advantage turned to good account, every leak stopped, and the farmers will come out all right. L. D. M.

RENOVATING PASTURES.

The *Country Gentleman* quotes from the *New England Farmer* an article on this subject, in which it is recommended to enrich pastures by cropping, or "turning them out to pasture," that is by putting them to pasture for two, four, or six years—and then plow and put down to seed again. A crop of peas, millet or buckwheat, may be grown, and turned in when green. This the writer puts forth as theoretical, when in many parts of the country it is the practice—in some the common practice, the rule. In central New York, especially in Herkimer county, this is the case. For at least fifteen years, land there has been treated in this way, and the result has been, what the writer above anticipated. He accounts for it in this way:

"What the precise operation of natural laws upon the land is, left in this condition, we are not able to say with certainty, but have no doubt that it may be fairly imputed to three causes; the annual decay of the vegetable matter which grows upon the surface, which serves as top-dressing, though it may be very slight—the effect of the solar rays in attracting mineral matters from below, upward, nearer the sur-

face, where the roots of plants may readily find them; and the fertilizing influences of the atmosphere, the great ocean of light, moisture and quickening gases ever spread over the soil and descending upon, to feed and perfect the vegetation that covers the surface of the earth. We are inclined to think that the principal advantage received by land in a state of exhaustion is from the latter source."

This is very clearly expressed. But the writer should have added another cause—the dropping of excrement and urine. This is the commonly understood source of enriching pastures by the farmers who practice this mode of improving the soil. Treated in this way, the land doubles in fertility in from four to six years; generally after the second breaking up of the sod. This is usually done the third or fourth year; sometimes the second. But a green crop is seldom plowed in. It is generally harvested, and the seed sown in the spring. It is the most advantageous mode of enriching the soil, the surest, and the cheapest, and is applicable to all soils; but less to very dry land. Still there is little distinction made with these farmers. Dairying constitutes their "cropping," though sheep are also held. Dairying alone gives the full profit of successful farming; and what crops are raised are always highly remunerative.

ICE-HOUSES.

Ice can be kept in large quantities during the whole summer season in houses built entirely above ground; but where it is desired to have a preserving chamber, and to insure a sufficiently low degree of temperature to attain good results, it is indispensably necessary that the earth should be banked up to the height of several feet against the outside of the building. In constructing my ice-house, I took the advantage of a convenient and descending spot, sunk a pit 15 by 18, and from 4 to 5 feet deep; walled it up to the height of 9 feet, banked the earth up to the top of the wall all around, except a space for the door-way; upon the wall I put a frame 6 feet high, which gives a height inside from the bottom to the comb of the roof of over 20 feet. I put heavy sills in the bottom, except in a space 4 feet square for the preserving chamber. Upon the sills, I put a floor of two-inch oak plank, and on the top of this a floor of one-inch pine jointed closely. The floor has a descent of two inches towards the preserving chamber, and it conducts the waste water from the ice to this chamber. I put in an inside frame, and lined it inside; this left a space of six inches between the lining and the wall to fill with sawdust, and the partition between the ice and preserving chamber is also double, and filled in with sawdust well packed.

To complete the preserving chamber, I first put in clean sand to the depth of four inches, then paved it with medium burned bricks, they being preferable to hard, on account of their capacity to absorb and retain a large amount of water. Pains were taken to have the floor exactly level in one direction, and also very tight, so that all the waste water from the ice shall be conducted to and distributed regularly upon the bricks. This keeps them so constantly cold as to preserve milk, during the hottest season for from 33 to 36 hours, perfectly sweet, and keeps butter very hard. One valuable feature belonging to this mode of preserving milk and butter is, that during the warmest weather of summer season, when cold, sweet milk, and butter of a degree of solidity equal to that of the winter season is appreciated as one of our greatest luxuries, we can have it so, from the simple fact that at that particular time the supply of cold ice water is greatest.

Butter made and kept in this way does not become so soon soft after being brought to the table as that which has been kept in a spring of water, nor do thunderstorms appear to hasten the development of lactic acid. We have noticed no perceptible difference in the length of time which the milk has remained sweet in regard to clear or stormy weather. I have observed, at different times, by placing the thermometer within one foot of the bricks in the preserving chamber, that the temperature was about 54 degrees, while it was 95 in the shade outside. The sand underneath the brick subserves an important purpose, by retaining the water, and supplying it to the bricks by capillary attraction at such time as there is not a great supply coming from the ice.

The space above the preserving chamber should be open and unobstructed to the roof, and over the ice there should be a good ventilation to the roof, to carry off all the vapor which may arise from the milk.

An ice-house constructed in this manner is one of the best investments for a farmer, for besides securing the luxury of preserving milk and butter cool, vegetables of different kinds may be preserved fresh until a succeeding crop grows. I kept one year's beets good till the following summer; also cabbages. These latter I laid upon the ice, which imparted to them a cripsy sweetness, perfectly delightful in the very warm weather of June. Vegetables may also be preserved in this manner by farmers, so as to bring them fresh to the market in early summer. —[*Ex.*

A New Way to Take Honey from the Hive. —Bore a few holes near the top of your hive, which place in a tub, top down. Set another hive over this, and then gradually let water into your tub. This will drive the bees into the upper hive, which, when the bees are all in remove to the bee-stand. Your lower hive will be filled with water; but it will not injure the honey. Draw off the water, and in a short time the honey combs will be dry. But few bees will be lost in the operation. Tried. F. G.

The man who applies manure the most skilfully, is the most skilful farmer.

POTATOE ROT.

Potatoes dug late are sound, the rotten ones having decayed; dug early, they are also sound. But these potatoes, it must be remembered, are not ripe. *The rot takes only the ripe ones.* (Have we not here a key to the cause of the rot in potatoes?) Those tubers left in the hill late are usually small, and have not received their full growth. It is as if you dug them in June; they have not advanced to maturity in consequence of having set late. If your potatoes are destined to rot, you will know it only positively when the tubers are affected, which means that the vines also are affected: for the tuber and the vine are one. It is too late then to save your potatoes—though lime it is said will arrest the rot if applied immediately after they are dug. We have seen this tried, though not thoroughly; and what we have seen, has been favorable.—The lime, thus applied, improves the potato; it makes it more mealy, and sweeter. But, perhaps the best way—and one that is practiced extensively—is to leave your potatoes in the ground when there is a decided rot set in—for then they will afford manure, and what you get will be clean potatoes. Is it not better for these diseased tubers to enrich the soil, than to infest the cellar? "But, to dig early—that prevents the rot." So it does. But it also prevents ripe potatoes, which is the thing you planted your potatoes for. You have only unripe, watery potatoes, and, not one mealy. This will not do. A potatoe must be mealy, if it wants to be eaten. A watery potatoe is indigestible, or nearly so. F. G.

MANAGEMENT OF CIDER.

Calling a few days since at the farm of Aaron D. Weld, Esq., of West Roxbury, we found the process of cider-making going on, although it was since the "cold turn" of the second week in this month. The cider-house is a pretty tight building, and the mill is in the basement or cellar, which is proof against the frost in any but the most extreme weather. Three divisions of apples are made. The first and principal division consists entirely of Russets, which produce the richest juice and the strongest cider. The second comprises Baldwins and any other varieties ripening at the same time. The third comprises all apples that are slightly affected with rot, the juice from which is made into vinegar.

It is well known that the Baldwin apple does not make good cider. Mr. Meserve, Mr. Weld's judicious manager, stated that cider from this variety will not keep well, under ordinary management. The course here pursued is to *freeze* it. The casks containing the cider are set where it will freeze, and when the process of congelation has been carried far enough, the unfrozen liquor which is in the centre, is drawn off. The greater the degree of frost to which the cider is subjected, the smaller is the unfrozen portion remaining in the casks, and the stronger it is. To render the cider from Baldwins of equal strength to that of Russets, it is necessary to freeze one-third of it—that is, to reduce the quantity by freezing one-third. This makes about as good as Russet cider.

Sometimes, for especial purposes, the degree of freezing is carried further—from one-half to two-thirds being frozen. The liquor which is then drawn off is very strong, and will keep any length of time, unchanged. Some of very fine quality was shown us which was three years old, and Mr. Weld stated that he had some, equally as good, which is eleven years old.

The practice of freezing cider is not new, but we have never before met with any one who turned it to so good account as Mr. Weld does, As some persons may ask what is done with the part that freezes, we will merely say, it is thrown away. It will not make vinegar, and has no value so far as is known.

The fame of the "Russet cider of the Weld Farm" is wide spread. We have no intention of betraying any secrets in regard to its manufacture, when we say that the main points are, making it in cool weather, keeping it in sound casks in a cool cellar, carefully managing the fermentation, and purifying it by twice drawing it off the lees.—[*Boston Cultivator.*

BARNS ATTRACT LIGHTNING.—Barns are mostly struck by lightning in harvest, or after. This is caused by the moisture which, through the sweating process of the hay and grain, escapes and attracts the lightning in its ascent to the clouds. This steam or moisture is a lightning rod, as water is a good conductor of electricity.

GRASS SEED ON OLD MEADOWS.—A correspondent says he has had "good luck in sprinkling grass-seed on his worn-out meadows." It "improved quality and quantity of grass." He sows it early in the spring. Among our best seeding, is that sown on the snow early in spring. The fresh snows that appear mornings, an inch or two deep, are just the thing. Of course this can only be done on winter grain, or old meadows and sods in general. Sown thus early, the frost will harrow in the seed, and do it more effectually than anything else.

The Effects of Water Upon Grass.

Water is a fertilizer. Hence, where much water falls during the season, there is a good growth. Not alone, however, in consequence of the fertilizing principle which the water may contain, but because water is a solvent of the nutritive properties of the soil, and a medium of conveying it to the plant. All vegetation is thus affected; but grass more particularly. It requires copious draughts of moisture. It is in a measure a water-plant—some grasses entirely so. Hence irrigation is of the utmost importance on meadows and pastures. There can scarcely be too much rain for grass. Look at the swales; which at all times would seem to be wet enough; yet all farmers know well enough that in a drouth the grass is lighter than when there is constant water; in which case the grass is lodged—a tangled mat, which it is difficult to mow.

Take a hill, where the land is dry enough, and the grass light, and direct a spring of water upon it, and what is the result? A dense bed of grass. And how long will the grass in such wet places last, without manure? There is no end to its yield. "Give me water! water!" is the language of the grass. The following on the subject is from the *Boston Cultivator*:

"Mr. Rice's experience has demonstrated that land may be kept in grass permanently by irrigation, and that neither the quantity nor quality of the crop will deteriorate. He has grass-land which has been irrigated twenty years, and the principal change in the crop has been that it becomes rather finer from year to year. He has one lot which has been irrigated annually for twenty-five years, and all the manure it has had in this time besides water, was a top-dressing of compost of one part yard manure and two parts muck, at the rate of ten cart-loads per acre, twelve years ago. The dressing increased the crop for one or two years, but it has always been heavy. I examined the hay from the irrigated grounds, and found it to be of excellent quality."

Here we see the virtue of water. Whether applied, or retained, the effect is the same. Some soils are leachy, and require more water. Some soils are rich, and retain it longer—at least the gases. Mulch is an excellent retainer. Hence manure adds, not only its fertility, but retains the moisture. This is another reason why surface-manuring is more beneficial to grass than to grain. Shade, also, which retains moisture, is favorable to grass. "Water" is the constant cry of grass. It cannot be drowned unless immersed. What then shall be done to irrigate our land? Here is something that looks towards an answer to our question:

"The system of irrigation patented by Mr. Brown, of Aberdeen, consists of a series of perforated pipes placed in parallel rows, for distributing water over the intervening spaces. The water escapes from the pipes in small jets at different angles, and afterwards falls in the form of a gentle shower. The pipes are of lead, perforated at the distance of about 14 inches by two small holes—these opposite to each other. Three pairs of the holes are near to the upper part of the pipe—the next pair are lower, being wider apart; thus six jets ascend at the same angle, three on each side, and two at a different angle; and the water so ejected is separated in drops, and falls over the adjoining spaces so equally that each part receives about the same amount of water. The distance between the pipes requires to be regulated by the amount of pressure—the greater the pressure, the water is ejected over a wider space. The most convenient distance is 60 feet, but it necessarily varies with the means at command to force the water through the small opening in the pipes, the water so distributed rising according to the pressure."

There is no doubt the genius of the times will invent something that will be a substitute for what is so much needed.

The Michigan Plaster Beds.

In 1833, the existence of plaster was discovered here by a party of savages, who were employed by the General Government to run a road across the State from Detroit to Grand Haven. Since then, various beds have been opened, and worked with varying success; but in all cases, finding a prime article. In 1860, the various companies were merged in one, and thus all interests united, under the name of the Grand Rapids Plaster Co., which has since been doing a mammoth business. It represents capital to the amount of half a million of dollars. Wm. Hovey, Esq., is its treasurer and agent, and resides here. No purer gypsum is found anywhere than this; and none this side of Nova Scotia of equal quality. It is all translucent, and most of it transparent. Its purity renders it better for the chief uses to which it is put (land plaster and stucco) than any other at the West.

Until about the time of the consolidation of the various companies, little had been done more than to supply home demand—say a circle of 100 miles. But the completion of the Detroit and Milwaukee Railroad, opened up a large country, and gave the "plaster trade" a new impulse, and the day the Railroad is completed from here to Ft. Wayne, Ind., the business will be doubled.

The supply is inexhaustible, and the demand steadily increasing. The benefit of plaster on most farm crops, long ago ceased to be a question.

On the clover crop it will double and quadruple the quantity. No one will believe its effect till seen. Its great use is as positive and as well-known as the fact, that clover grows at all. Facilities for shipping plaster West are all that could be desired. It is loaded on steamboats, direct from the mills, and has water communication to any point on Lake Michigan.

A Point About a Hen-House.

Do you ever see hens lie in the dust? Yes, often, and when the sun shines. Why is this? Because the dust is heated by the sun, and thus warms the fowl. It is therefore to be inferred that a fowl loves the heat. They bask in the sun; they luxuriate in the heats of summer. In winter, how is it then? Then they shiver and suffer enough. The truth is, they cannot stand the cold. The hen is a tropical bird.

In making a shelter then, for hens, it will at once be seen that warmth is a matter of the first importance: it is an absolute necessity to a hen's laying. A suffering hen will never lay; whether it suffers from cold or hunger. A happy, singing hen is very apt to lay. This is the important thing. You cannot get your hen-house too warm, i.e. in winter, without a stove. It is only the excessive heats of summer when the thermometer ranges at a hundred, that a hen becomes uncomfortable, and then it cannot be said to suffer.

Make your shelter then as warm as you possibly can. Build on the south side of hills or barns. Sink into the ground, or raise the sides with ground: hens are not afraid of the ground. This will make your house warm in winter, and comparatively cool in summer. Give as much fresh air as possible without endangering the warmth. Fowls like fresh air; birds live in it. Have the ground dry. It matters not so much about the air; a hen's feathers are proof against that. Only let fresh air constantly in. Let your floor be made of ashes, lime, and gravel, say to the depth of six inches. Here they will revel and peck away, the lime and ashes keeping away lice and other vermin. At least a part of the floor should have this bed, and the whole floor strewed over with it.

Never *watch* a hen; it will surely detect you, and become suspicious; and a suspicious or frightened hen, is among the hens that don't lay. A happy hen lays, especially when it has all the circumstances of summer about it, which includes plenty of food.

We have known hens kept all winter in the cellar, and do well; or under a barn. In a word, avoid cold. The hen-house warm—better if artificially warmed; plenty to eat, but none to waste; animal food mixed with the grain; ashes, lime, and gravel, to work in; fresh water always handy; nests hid away; roosting poles easy of access; the hen-house unmolested:—these are the main things, and will make a hen lay the year round. This is not theory; it is abundant practice.—Though the non-laying practice is much the most prevalent. It is because the above requirements are not followed. A family of hens treated affectionately, will surely repay you with their own valuable treasure, *fresh* eggs, to say nothing of the singing (in winter.) Every one should have a good hen-house. But remember, you have a family to treat well, not to throw the food to and let alone in the cold, desolate shelter, no care taken, only food thrown in and water changed once a week, ashes and lime never changed. Treat your hens in this way, and they will treat you accordingly in return. Make your hen-house roomy, and let the sun have a chance to look in. It will be a pleasant sight for the hens, who you know love to lie out in the sun mornings. Anything to make a hen comfortable. Observe a hen's movements, and you will soon see what she needs.

But, we meant to speak only of the necessity of warmth in a hen-house. We will conclude by again urging its necessity.

WHEN TO PLOW.

Of all things, avoid plowing when the ground is wet, especially in spring. We have known land spoiled for years in this way. The worst soils to plow when wet, are poor soils, yellow or clay soils. These, when turned up, get baked by the sun; they are the next thing to a brick. It will take the frost one or more winters to restore your soil, and sometimes much longer.

We knew a field spoiled for the season by harrowing the ground when wet, or too moist: nobody of course would work soil when actually wet. The crop did not return the seed. It was a total failure, of even grass and weeds. It was a black soil (our own land years ago), and we were told it would not hurt black soil to harrow it after a rain. So we were inclined toward the soft insinuation. It taught us a lesson.

Many farmers have poor crops on rich soil, i.e. their crops fall short of expectation; and they are at a loss to account for the failure. We have traced such cases to wet plowing.

Plowing is a mechanical operation. It means simply pulverization, or loosening, of the soil. To be sure, other things are reached by plowing: but this is the main thing. Now, to plow ground wet, is to pack it—just opposite what is intended, viz: loosening the soil. When once spoiled by wet plowing and baking, the harrow—you may use it as much as you please—will not remedy the evil. It will reduce the large lumps—but they are still lumps, hard, and of as much service—and no more—as gravel—precisely. If the soil, to the extent of cultivation, is all of that nature, nothing can be raised. But the top usually contains the baked lumps.

We have seen farmers with the axe-head at work, pounding the lumps. We have done it ourselves in our earlier days. It never failed of a poor crop in such case.

The opposite extreme should also be avoided.

Land can be plowed too dry, that is, some land clay soils for instance—such soils as will crack in a drouth. Such soils must be carefully treated at all times. They should be plowed generally a few days after a shower which wets the ground through, just at the time when it has ceased to be too wet: in other words, plow such land as wet as may be without injury. This will throw it up mellow and lively. A sudden shower will not prepare soil for the plow. It wants to be saturated, every pore filled, all the fertilizing principle held in solution. Then after the proper time, it will "fall apart" by plowing.

Much land is hurt by fall-plowing. It is thought the frost will cure all wet plowing: it will be all right by spring. It will do this in a measure—that measure depending somewhat upon the time of plowing, and upon the weather that follows. Late in the fall, the sun is not there to bake your soil. This is your only advantage. The plow packs it all the same, or mortars it to a certain extent. There will be found in such soil, a certain amount of hardness, which the harrow cannot penetrate, and scarcely the cultivator, in the spring. All farmers must have had this experience.

In such case, and in the case of lumpy soils, manure has little effect in correcting. Time alone seems to be the ameliorator. People having more land than they can properly attend to, are those most apt to work soil when too wet. "Rather wet than late," seems to be their motto: a very bad motto. One of our neighbors spoiled his garden this season by early, wet plowing. He was told so at the time, but disregarded the admonition. Now, he has plowed it—this fall—not only wet, but thoroughly soaked. He is told he will have a mate to his last summer's crop; and such will be the case, though he has used lime and manure. He will have a lumpy garden, same as this year. It never fails. Too wet will always show.

Quack.—Quack usually luxuriates in dry, rich soil. When once seated, it becomes a pest. The best way to eradicate quack grass is this: Plow deep; repeat the plowing, and apply the cultivator thoroughly. A large, deep-running cultivator is best. The quack should now be gathered as one would hay, with a horse-rake, and removed from the field. Sow with buckwheat. Add manure if the ground is not rich. The fall will show you a clean, mellow soil, free from all sorts of weeds.

Timothy and oats are muscle-makers, and are thus used for horses.

Hallet's Pedigree Nursery Wheat.

We have received from Wm. Glasgow, Jr., of this city, a small handful of this celebrated wheat, which he procured last fall at the Great International Exhibition at London. It has been "bred" upon the same principle of *repeated* selection which has produced our pure races of animals, starting from one grain in each year for four years successively. Any of our subscribers feeling sufficient interest in this wheat to try it, can, by sending us a stamped envelope with their address upon it, obtain a dozen grains. It is a winter wheat and should not be planted before August or September. Mr. Hallet's views on the culture of wheat will be novel to our farmers, and as some valuable hints may be obtained from them, we give them in his own language:

The wheat-plant from its nature requires a mode of culture which permits its perfect growth, and when it is so cultivated, by the repeated selection of the seed, of which, as in breeding animals, the record is a pedigree, we can gradually increase the contents of the ears without in the slightest degree diminishing their number, which is, in fact, just so much increase in the crop itself.

A single grain of wheat, by nature, possesses such properties that, if planted at the proper time, it will in the following spring have so "tillered" as while lying flat upon the ground to extend over a circle one yard in diameter; and will, after its stems rise to a vertical position, produce at harvest upwards of 50 ears upon an area of a square foot, upon which area only each grain may nevertheless have been planted as the extremities of the roots of adjoining plants feed upon the same ground, while those of the stems interlace upon the surface.

Such is the habit of growth of the wheat plant, but so little does the universal mode of cultivating it permit its full development that the ears produced upon an acre of land are not equal in number to the grains sown. No unprejudiced person thus fully realizing the nature of wheat to "tiller," can doubt that it is just as irrational to so crowd the seed that nature cannot develop itself, as it would be to leave half-a-dozen turnip or mangold plants within an inch of each other: certainly no one would proceed to so cultivate it were it altogether a new species.

But in this very principle of the full development of each plant (thus universally prevented) we have our only means of greatly increasing our wheat crop, for such increase is to be looked for in the contents, not (greatly) in the number, of the ears—in other words it must be obtained vertically in which direction there is plenty of room, not horizontally where there is little or none left. Ears of the greatest possible contents can be obtained only from perfect plants. A perfect plant of wheat consists of three principal parts, viz., the roots, the stems, and the ears. When a grain is planted under the most favorable circumstances these are produced as follows:

—Shortly after the plant appears above ground, it commences to throw out new and distinct stems, upon the first appearance of each of which a corresponding root-bud is developed for its support, and while the new stems "tiller" out flat over the surface, their respective roots assume a corresponding development beneath it. This process will continue until the season arrives for the stems to assume an upright growth, when tillering ceases, and the whole vital power of the plant is concentrated upon the production of the ears. These will be the finest it is capable of producing, unless the growth of its roots have been in any way interfered with, as by having been cramped or crowded by those of other plants, when the size of the ears will be proportionately diminished.

This fact is pregnant with practical inferences bearing upon the present mode of culture, which by the use of superfluous seed, crowds the plants and produces ears of only one-half the natural size.

A few facts will illustrate how the proposed increase may be obtained:—A bushel of the Pedigree wheat (growth 1861) contains about 460,000 grains, and an acre of land 43,560 feet; hence 840 grains per square foot equals ten quarters or 80 bushels per acre. From single grains, planted at the proper time, one on each square foot, I obtain plants consisting on the average of 23 ears each, which need only contain 36 grains in each ear to produce a crop of 10 quarters per acre. Two of these stools, each of 24 ears, taken by a stranger as not the finest, contained 1,878 and 1,911 grains, or an average of 79 per ear; while those ordinarily grown have been remarked to average about 30 or equal to the number of bushels per acre. But, besides the size of the ears, I thus obtain a greater number than that ordinarily grown per acre: thus, I have 1,001,880; while upon the adjoining land a magnificient crop of the same Pedigree wheat (54 bushels per acre,) drilled with 6 pecks per acre, or more than twenty times the seed, I find 934,120: and the number usually grown is considered about equal to the number of grains in a bushel, or under 700,000.

(To be Continued.)

On Wintering Bees.—Bees should be kept cold—but not killed. The colder they are kept, without destroying them, the less honey they will require. In a half-torpid state, a bee will eat comparatively little. This then will be a great saving where many bees are kept. There are various opinions about wintering bees. We have known them "winter through"—when exposed to the rigors of the season. Shelter from the wind and the sun is generally sufficient. A cold room, darkened, is preferred by some. In all cases, do not disturb your bees, but handle them carefully when you remove them.

The snow of the morning will often be heard singing in the brook at night.

WET LAND.

Wet land keeps out the air; and it is just as necessary for the soil to breathe as the lungs. It must have air. The nitrogen of the atmosphere is one of the supports of the plant. It is the great flesh-maker; and enters largely into the grasses which draw it from the atmosphere and from the soil. If wet, the soil has it not, and consequently can not impart it. Hence grasses on wet lands are destitute of nitrogen, and are poor feed. Wet soil also keeps the sun out, and hence the temperature is reduced.—The cure of all this, it will be at once seen, is under-draining, followed by thorough cultivation and sub-soil plowing. Lime added will sweeten your soil, for all wet soils are more or less sour. This must be remedied. It is most gratifying to look upon a field, once wet, now dry and productive. This we see everywhere in the older, more cultivated parts of the country; and hence draining is one of the most progressive things in farming. It also increases the health of the country.

HEADERS AND REAPERS.

Ed. Valley Farmer: In the Dec. No. of your journal, a correspondent from Prairie du Rocher, Ills., desires information in regard to the use of Headers in securing the harvest.

Perhaps among your great number of exchanges you did not notice a little controversy between Reapers and Headers, in the *Prairie Farmer*, in which your correspondent took an humble part; but as it will not take long I will briefly notice some of the machines above referred to.

A reaper will enable you to commence your harvest sooner, by four or five days, than a header; will give you a chance to get your grain cured better in the shock; will enable you to build a better stack, save your straw in better order, and by all these combined give you better wheat and flour.

A Header is a costly piece of machinery, involving an outlay of over two hundred dollars; can be used to advantage only a few days, (not over twenty each harvest;) cannot take up lodged grain; ought never to be used to cut oats, because when just fit for the reaper they are too green for the header, and when fitted for the latter, are so ripe as to shell out the best, and because oat straw will hold moisture much longer.

Where hands are scarce and the harvest large, and the grain *is fully ripe and free from weeds*; where care can be bestowed in building air chambers in the stacks; where good wild hay is plenty and easily secured for a covering for

those stacks, and when the season is favorable, without high winds or driving rains, where a thresher may be secured as soon as the grain shall have passed through the usual sweat, and where good hands and stout horses may readily be had—a Header may be used to advantage.

From what we have seen on our own and our neighbors' farms of the work of headers, under *any circumstances than those enumerated above*, we would, and we do it reverently, use the language of the Litany—from all Headers "good Lord deliver us."

We think more of the "grain binders." We have no doubt another harvest will see these useful little machines successfully at work. From what is claimed for them, they can readily be attached to any ordinary reaper. These grain binders are really labor-saving machines; without endangering the quantity or quality of the grain they bind. Once proved successful beyond a controversy, and I would not give a J. P. Manny reaper *with a binder attached*, for a half a dozen Headers.

OLD FIRKIN.

THE WHEAT MIDGE—WEEVIL.

This insect was imported into this country from Europe about thirty years ago. It got introduced at Quebec in unthreshed wheat. Thence it spread over the country, and is still unabated in its ravages.

It appears about the middle of June, rising out of the ground, where it lay in the cocoon state during the winter. As soon as hatched it makes its appearance, and at once searches for the wheat field. It lights on the heads of the wheat, and deposits its egg between the chaffs. Soon the small orange-yellow insect appears from the egg, and fastens itself to the soft berry, feeding on its juices, thus destroying or injuring the grain.

In about three weeks, the insect leaves the ear, and crawls down the stem, and works itself into the ground, remaining there during the fall and winter in a minute cocoon, till the warmth of June changes it into a fly, which comes forth, and commences its depredation as before.

There is one thing about this insect that relates to some other insects. A drouth will kill it, or prevent it from attacking wheat fields successfully. Hence, a drouth occurring in June, is favorable to wheat, so far as the insect is concerned. On the other hand, much damp weather is sure to be fatal to the wheat crop, that is, winter wheat, and spring wheat sown early. If sown late the ear will not be developed by the time the insect disappears. Hence spring wheat is sown late; the thing is well understood.

The Midge appeared first in Great Britain about a hundred years ago, and thence made its way into France, where it appeared recently. But it is not feared in those countries, as a small black fly, in great numbers, follows in its way, and deposites its egg in the larvæ and eggs of the Midge, thus destroying them. This parasite is the successful foe of the weevil, and should at once, if possible, be introduced into this country.

Farmers should be careful and not permit any screenings of wheat, containing the yellow insect, to be thrown out where it will get into the ground either through the manure, or otherwise. Further; if all wheat-fields were plowed, either in the fall or spring, the cocoons would doubtless be destroyed, as being buried too deep for escape. Where the previous season was one of great humidity, this mode (of plowing wheat-fields) would be almost a cure, as wheat is the first thing attacked, and almost the only, in moist weather. In dry weather, the insect will seek low, damp places. It is found in clover and the grasses.

Tobacco Culture in the West.

As there is a fair prospect that seed leaf tobacco will command a good price the ensuing year, and as many of our western farmers are about to enter into the business who have had little or no experience in cultivating the crop, I beg the privilege of suggesting a few ideas to them, derived from my own experience, through your wide spread journal. In selecting the ground for planting, the soil should be dry, rich, sand loam, in order to produce a fine leaf and good flavor. Many crops have been ruined the past year by planting them on wet bottom lands. When raised upon rich, black prairie soil, a coarse, thick leaf will be produced, with large woody veins and a peculiar bitter taste. The seed is slow in sprouting, and the plants are rarely large enough to transplant from the beds into the field before the 15th or 20th of June hence, in this State and in others about the latitude of our own, a rapid growth is required, in order to obtain a good crop and secure it before the appearance of frost.

In raising the crop west it is important to protect it as far as possible from the strong prairie winds that prevail, as its value depends much upon the integrity of the leaf, therefore timber openings and a southern and eastern slope should be selected, as far as practicable. The best seed leaf in the United States, commanding the highest price, is raised near Hartford, Conn., in latitude equally far north with our own. In this crop, as in all others, its value and success in raising, depends much on the seed used. Of the several varieties I think the broad silk leaf best adapted to our western climate. The narrow leaf grows longer and thicker, with large veins, hence the advantage of selecting seed from the first mentioned.

In commencing the cultivation of tobacco, it is

of vital importance to have good seed and a bed of early plants, in order to have them transplanted in season to mature before the appearance of frost. As the seed is often ruined by frost while in the capsule, it should be tested before planting by sprouting some portions of it. The ripe seed may also be known by its emitting an oil when mashed upon the thumb nail. The bed for plants should be made rich with manure and plowed in the fall. As soon as the frost leaves the ground in the spring, brush should be strewed over the bed and burned, to destroy the seeds from weeds, and thus save much labor in weeding the bed.

One tablespoonful of seed to a rod square of ground, evenly sowed upon the surface and rolled or trod in, as early in the season as possible, will be what is required. It should be left on the surface. If raked in and buried it will never sprout. The beds should be kept clear from weeds, and should the season be dry may require watering. In order to produce a good crop, the land should be thoroughly prepared and manured before the time for transplanting. Horse manure seems to be the best fertilizer to cultivate seed leaf adapted to cigar manufacture. It produces a rapid growth, thin leaf, fine flavor, and a white ash when smoked, probably dependent upon the ammonia contained in the manure. The dressing for the land may be spread on and plowed in, or placed more immediately under the plant in drills. In a wet season or dampish soil the latter method is preferable; but care should be had to make the drill deep and cover the manure thoroughly. The drills should be 3½ feet apart, and the plants set in straight rows two and a half feet from each other. Transplanting should be immediately after a rain if possible, otherwise it will be necessary to water each plant separately. The plant should be cultivated thoroughly, and kept free from weeds, and also from the green tobacco worm that infests it. If the plants are set as they should be, the 15th or 20th of June, the green worm will require attention in July. Where the fields are large the turkey is of great value in worming the crop. They travel regularly through the rows, picking off such worms as are in sight, and the turkey herd easily tolls them to the rows he wishes them to follow by corn which he carries in his pocket for the purpose.

When the plant has arrived at a certain height before blossoming, it requires topping. If of good growth top it two and a half or three feet from the ground, leaving 12 or 13 leaves on a stalk. As the suckers appear they should be broken off, and before the plant is cut should be entirely stripped from the stalk. When the crop is mature for harvesting, the leaf assumes a mottled appearance, and cracks open when folded.—[*Ex.*

Barometers.—The *savans* of New York, with Solon Robinson and Prof. Mapes at their head, in "Farmers' Club" assembled, have decided against the use of the barometer (in agriculture). This we presume settles the question—and yet, there are farmers who are using the instrument to advantage, and probably will continue to use it in defiance of the dictum of these magnates.

Plowing in After-growth.

It now and then happens that we get an early harvest, and a warm growing fall, when the shelled grains and the grasses have a luxuriant growth. These, if properly treated, afford considerable manure. An oat or barley field, if mellow, needs no other treatment than harrowing in the spring to insure a good crop of grain. To plow under the fall growth, is to keep it inert to a certain extent, and of little value to surface-rooting grain crops. If harrowed only, you have the decomposed fall growth as a top-dressing among the roots of your grain. When plowing is *necessary*—and that is in the great majority of cases—the benefit of course will be less. A writer somewhere suggests that land plowed in the fall be sowed with grain—plowed and sowed as early as possible—and then the harrow will in all cases come in well. It is a suggestion worth trying.

APPLYING MANURE.

Manure is beneficial, whether plowed in deep, or shallow, or not at all. That applied on the surface, or slightly harrowed in, is—not necessarily the most beneficial—but the most prompt, acting the more readily. This has led many to infer it has more effect, and is preferable. But this is a wrong view. The benefit will be realized if the manure is plowed under to a good depth, providing the soil is not leachy. The manure is safe there; and it will last longer than top-dressing, with the same quantity used, as top-dressing always loses some of the fertilizing gases. But as the effect is readiest when under the direct influence of the sun and air, we are apt to suppose there is more benefit.—Be not afraid therefore to work in your manure; not indeed in cold, clay, stubborn soil, but porous, aerated. Far as the roots of vegetation extend, will the influence of manure be felt. The readiest mode of all is liquid application. This is too little practiced. Its effect is immediate. When your root crop is suffering for the want of manure, especially in a drouth; when the manuring of your garden has been neglected, or if too little was applied—then liquid manure comes in most opportune.—You apply moisture as well as fertility. And the effect is immediate, like the effect of rain, only more abundant and lasting. Night-soil is probably the best base for liquid manure. It is generally at hand, and may be made at once, with little trouble. F. G.

Ever live (misfortunes excepted) within your income.

A Cheap and Good Smoke-House.

A Western New York farmer publishes his plan of a small, cheap and good smoke-house, which, as it may contain some practical hints for our own readers, we append:

No farmer should be without a good smoke-house, and such a one as will be fire-proof and tolerably secure from thieves. Fifty hams can be smoked at one time, in a smoke-house seven, by eight feet square. Mine is six by seven, and is large enough for most farmers. I first dug all the ground out below where the frost would reach, and filled it up to the surface with small stones. On this I laid my brick floor, in lime mortar. The walls are brick, eight inches thick, and seven feet high, with a door on one side two feet wide. The door should be made of wood, and lined with sheet iron. For the top I put on joists, two by four, set up edgewise, and eight and a half inches from centre to centre, covered with brick, and put on a heavy coat of mortar. I built a small chimney on the top in the centre, arching it over and covering it with a single roof in the usual way. An arch should be built on the outside, with a small iron door to shut it up, similar to a stove door, with a hole from the arch through the wall of the smoke-house, and an iron grate over it. This arch is much more convenient and better to put the fire in, than to build a fire inside the smoke-house, and the chimney causes a draft through into the smoke-house. Good corn cobs, or hickory wood are the best materials to make a smoke for hams. The cost of such a smoke-house as I have described is about $20.

An Agricultural School in Mo.

Ed. Valley Farmer: It is my intention to commence a school at this place about the first of April next, in which I propose to teach the different natural sciences, as Zoology, Botany, Mineralogy, Geology, Physics and Chemistry; and, besides, Mathemetics, Surveying, Book-keeping, Drawing, Grammar and Geography.

I expect that the young men whom I propose to instruct in my school, are at least 14 years of age, and have already had some common-school education; but also would be willing to accept on reasonable terms such students who would need instruction in the more elementary branches of learning.

We have similar schools in Germany, and I was educated myself in one of them, as my final testimonial, the translation of which I enclose, will show (the original, being in my possession, can be laid before you or any competent person. The special testimonials for every year, which I can produce, show, that I was the first in all classes.) I am willing, if advised so by you, to subject myself to some examination before some competent person.

Having, besides, made a course of theological studies I was ordained and sent out as a missionary of the Lutheran Church to China, and have worked as such for some years at Hong Kong.

In this country I have been for several years a teacher in public and private schools, but it was all the time my wish to establish some school for natural sciences, which from boyhood had been my favorite studies.

I must confess, I have not in this country influential friends, who could recommend me, therefore, I propose to ask for the present time no charges whatever, if some (about 6) young men would wish to study at my school 3 days each week and pay for their instructions by working on my farm the three remaining days. In this case they would have to procure their own bed and food, and to cook for themselves. At the present prices of provisions in the country (if they are the right kind of men) it would not cost them much.

If a sufficient number of the students would prefer to pay for boarding, they could have it at my house for about seven dollars a month.

You will know, that the present militia organization does not interfere, teachers as well as their students being exempt from duty.

Hoping you will favor me with your kind advice, I have the honor to be, very truly your obedient servant, Carl Vogel.

Rhineland, Montgomery County, Mo., January 15th, 1863.

A Sangamon County Farm.—There is a farm of 12,000 acres twelve miles east of Springfield, which for its productiveness this season will, we think, compare favorably with any farm in the State. This farm belongs to Mr. Hamilton, of Kentucky, and is divided as follows: 1,400 acres wheat; 400 acres rye; 1,200 acres corn. The wheat field was entered last week, and in a few days more the entire crop will be in market.—Seven headers are at work, with threshers to match, producing a very lively spectacle, and suggesting visions of a goodly number of dollars placed to the credit of the lucky owner. We understand that 20,000 bushels have already been sold to a Chicago house at $1.25 per bushel, to be delivered in that city immediately.—This is equal to $1.08 on the farm.—[*Springfield Journal.*

The Plowing in of Manure for Wheat.—Experiments have been made (as reported) in a field which was divided into two parts. In the one, the manure (barn-yard) was plowed under the first plowing, which was deep. In the other, the manure was plowed under the second plowing, which was shallow, giving the manure the benefit of the action of the atmosphere. The result was, the latter produced the best crop, decidedly.

Keep good company or none.

Never be idle.

If your hands cannot be usefully employed, attend to the cultivation of your mind.

Live up to your engagements.

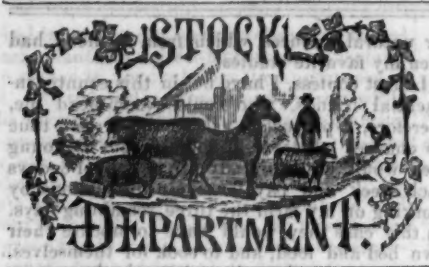
Keep your own secrets, if you have any.

When you speak to a person, look him in the face.

Good character is above all things else.

Your character cannot be essentially injured except by your own acts.

If any one speaks evil of you, let your life be such that none will believe him.



[Written for the Valley Farmer.]

VETERINARY DEPARTMENT.

By Geo. H. Dadd, Sen., V.S., Chicago, Ill.

DIVISION OF THE FLEXOR TENDONS.

The following case will illustrate the nature of the disease, mode of operation, and treatment:

I was lately requested to visit a bay gelding, the property of a gentleman residing in Dedham, Mass; the animal, in consequence of a slight accident, became the subject of *sprung knee*, or, as some persons contend, contraction of the flexor tendons (named *perforatus* and *perforans*), which had progressed, within the period of a few months, so as to render the limb the most deformed one I ever saw; for, when the toe touched the ground, the heel, which was very lengthy, was three inches above it; at the same time, the inferior extremity of the meta-carpus magnus (cannon) over-lapped the os suffraginis (large pastern) something like three-quarters of an inch. Such a deviation from the physiological perpendicular line, would, as a matter of course, bring a tremendous strain on the extensor tendons and suspensory ligament, and this appeared to be the case with the subject, for the tendons and ligament were rigid as a bow-string. The case being of recent origin I decided to operate.

Mode of Operation.—The horse was cast on the off side. After securing the limbs, the near fore-foot was released from the hobbles and held by assistants. A puncture in the outer lateral region of the tendons was made through the integuments, a convex, probe-pointed bistoury was then introduced, and by a gentle, sawing movement, both flexors were divided.—On straightening the limb, which was done without the least difficulty, the divided edges of the tendons were separated about two inches; these, of course, would have to be re-united by granulation and insterstitial deposits.

Treatment After the Operation.—The puncture through the integuments being small, just sufficient for the introduction of the bistoury, a single suture sufficed to close the orifice; this being accomplished, a cold water bandage was neatly applied, and then the patient was permitted to rise. He walked to the stable tolerably well, yet still a slight "knuckling over" at the fetlock; this was owing to the distended or lay state of the capsular ligament and extensor tendon. A shoe was now applied to the foot, having a straight piece of iron eight inches in length welded on to the ground surface at the toe; the object in applying this contrivance was to prevent flexion, and thus guard against direct reunion.

The operation was performed a short time ago, since which time the patient has been in the care of Dr. Jarvis Gay, of South Dedham (a student of mine), who reports that the animal is doing remarkably well, free from deformity, and is now at grass.

The two following paragraphs will give my readers an idea of Mr. Percivall's method of performing the operation of tendinotomy, and I leave the reader to decide which is the best method of performing it.

"The operation of tendinotomy, though a formidable one for the patient, is not a difficult one for the operator. The object is, section of the flexor tendons; the effect of which, as we have seen, is to let down the heel of th foot, not the fetlock, to the ground. The flexo tendons support the pastern and foot joints principally; the fetlock joint having the additional strong support of the suspensory ligament, which it still retains after the tendons have been cut through. This accounts for the heel of the foot, without the fetlock, being let down by the operation of tendonotomy.

Having cast the horse, and so secured the limb to be operated on that there is not much chance of any interruption being occasioned through its motion, I recommend that a longitudinal incision, three or four inches in length, be made through the skin, along the back of the leg, down upon the middle portion of the flexor perforatus tendon.

This incision freely and boldly made at once, the operator will be able to stretch the mouth of the wound he has made round to the inner side of the leg, in which stretched position the skin is to be held by an assistant, while the operator introduces the forefinger of his left land to push back the blood-vessels and nerve (which run along the inner borders of the tendons) against the suspensory ligament, so that they may be safe out of the way, while with the right hand he insinuates his bistoury between them and the flexor tendons. Opposing, now, the cutting edge of the bistoury to the tendons themselves, he commences incising them by a steady, but firm and strong, sawing movement, until both be completely divided. I say, he is to hold the bistoury—which ought to be a stout one—firmly, and to use it with some force, since such is the dense and tough texture of these tendons, that they are not cut completely through without some determination. Com-

plete division being made of them, the heel of the foot may not—in all probability will not—come down without some extension of the leg; and this must be made, not by such violence as Mr. Goodenough found himself compelled to use; still, with such force as will, if possible, make the limb straight, by stretching or even tearing through adhesions of moderate standing, so far as this can be effected without the risk of rupturing ligament or fracturing bone. The giving way of adhesions in such cases, is frequently attended with a sort of snap or jerk, denotive of their being overcome, and by this the end is known to be answered; such adhesions and impediments to extension being commonly situate about or in the vicinity of the fetlock joint. The usual and most effective mode of accomplishing the extension, is to place the knee against the front of the fetlock, and grasping the back of the foot with one hand and the upper end of the leg with the other, to use such steady and moderate force as will accomplish the object without doing thereby harm. This done, the divided ends of the tendons recede from each other, leaving a gap between them of one or two inches, or even more, dependent upon circumstances."

COOKING FOOD FOR CATTLE.

This has been long practiced, in a small way; but the subject, recently, has been thoroughly agitated. There are large cooking establishments, some of which recommend the practice; others, again, denounce it.

It is held that cooked food increases the water in the flesh; that pork is heavier, but less solid, and worth less. In some markets this is said to be particularly understood, especially in Great Britain. Cooked food disposes of mastication; and hence little saliva is mixed with it; and saliva is considered necessary to thorough digestion. Cooked food prevents chewing the cud, and hence is not good for ruminating animals. This also seems likely. The whole, however, is more theory than anything else; and until thorough experiments are made, the thing cannot be said to be decided. We know this, however, that mixed food, cooked and uncooked, is profitable. It interferes not with the saliva, nor the cud. The many people that we have known, who have had but one cow, have practiced this mixing of cooked and uncooked food, and, for aught we could see, have never had reason to regret it. Particularly have we known pumpkins, fed in a cooked state during almost the whole winter, to yield an excellent profit in the butter line. We can speak with certainty here, as it has been our own experience. And the pumpkins were hard frozen at that. They were chopped to pieces and then thrown into large kettles and boiled, with always some water added, thus making a regular slop. About twelve quarts a day was fed to each head. This was given in the morning preceded by straw, and hay at night. It gave a fresh, vigorous look to the cows, and a yellow appearance to the butter, and a fair increase in quantity.

We can recommend, therefore, with safety, a mixture of food. The ruminating animal doubtless needs a cud; and straw or hay will supply this.

To go to a great expense in steaming food—we doubt its utility. Stock can be kept in excellent condition without the steam, as the world has always demonstrated. And as the advantage cannot be great, the expense incurred will be apt to overbalance the benefit.—Where there is little expense in cooking—and there need not be much, as part of the food only is cooked—we are confident it will pay; we are confident, both from observation and experience, and we recommend the practice. "Slop your cows," is a phrase that cannot be mistaken. Each family, living in the country, knows what it means. It does not mean fattening your cows so much as increasing their milk. For this, we slop our cows, and for this we keep them. We prefer drier food where flesh is to be made. Or even a mixture here, in proper proportion, we deem not out of place. The hard grains make the hard flesh; the soft make milk. When cooked, food becomes softer and more tender. Hence, the old-fashioned practice of slopping, shows the wisdom of our forefathers who kept their cows as milkers.

Our dairymen are too neglectful of this evident fact. The fall should see slopping practiced extensively, and continued as long as milk is given. We know dairymen who do this with success; but there is much diversity among them. Brindle, particularly, should be treated to these delicacies: cooked rations for her, and a cud to keep her busy in her idle moments.

FEED FOR SHEEP.—The sheep is a nibbler, that is, will bite at almost anything in the line of herd's-feed. It will nibble shorter than any other stock—and it thrives best on variety: it will suffer without it. Feed it then by littles—a little straw, a little hay, a little grain or meal, a little of roots, apples, &c. It wants all this, and it wants you to furnish it—it likes to feed from your hand. It will waste nothing in this way, and thrive exceedingly. Yet sheep are fed like cattle. This is wrong. They are of a different nature, and require different treatment.

In-and-in Breeding vs. Cross-Breeding.

There is an article on in-and-in breeding, of excellent quality and great force, in the *Melbourne Economist*, printed in New South Wales. It takes strong ground in favor of breeding from relatives, and the writer, Robert McDougall, is not alone in his opinion. He gives statistics, but he does not give all. It is a commonly known fact, that our old-fashioned breeders knew little about crossing. There was some variety, but seldom an infusion of a foreign element. The result was, they had the best of milkers. There was no deterioration in this respect. The breed, however, was not noted for its beef qualities; it never was intended to be.

A pure stock must of necessity come under the influence of in-and-in breeding. Distant relatives, are still relatives, directly lineal, if not immediate. We see not what effect the immediate connection has, if the same current is there.

There is more or less of in-and-in breeding in this country, as well as in Great Britain and on the continent. We quote the following from the *Economist*:

"The most famous cattle breeders that were ushered into us with the present century, were the Messrs. Colling, of Darlington. These men, as can readily be seen from 'Coates,' selected their breeding beasts from various sources, as the French did their sheep. This they did, no doubt, with great skill, at the same time with a full knowledge of the strains of blood of their various purchases. From these animals they bred carefully and closely, until from brother and sister they produced the bull Favorite (252). This bull was allowed by all competent judges who saw him, to be the best in the world. What use his owner made of him can be best seen by referring again to 'Coates,' and giving the pedigree of a cow or two. Here it is:

'Barmpton, red and white, bred by Mr. R. Colling; got by Favorite (252); dam Bright Eyes by Favorite (252); grand-dam by Favorite (252); great grand-dam by Favorite, (252), &c.'

"Here, we see that while his owners considered Favorite (252) their best sire, they used him to his own descendants, generation after generation, to the day of his death. To show that they acted wisely, I may mention that at Charles Colling's sale in 1810, Comet, (155), an aged bull, got by Favorite (252), and out of a sister of Favorite (252), realized the enormous (in those days) sum of one thousand guineas: and no bull could be bred in-and-in more than was Comet (155). His father was his grandfather, his great grandfather, his uncle, his grand-uncle, his cousin, and what not; his mother was his sister, his aunt, his full cousin and second cousin, and every other cousin."

What have the cross-breeders to say to this? The little chances for observation which we have had, are rather corroberative than otherwise of the above.

The question is one of considerable importance—not in its effect upon stock so much, as in the pains taken to import and cross with rare and diversified blood. A thorough trial would certainly do this; and the trial need not be an expensive one; simply a test of in-and-in practice, as cross-breeding has been pretty thoroughly tested: thus, half of the job is already accomplished.

DIVIDING STOCK IN WINTER.

Every observer of the barn-yard in winter, must have noticed that the most robust stock has the advantage; not only in being "master," but in getting the tit-bits and the best places.

Here, it will be seen, is an error, and should at once be remedied. To prevent a strong sheep from running down a weak one, put the strong together, and the weak by themselves. By all means put the latter, which are harmless, together. If there are some still weaker, have a place for them. They will not only be free from the dread and buffetting of the others, but see what a chance there is to attend to them and feed them the better. Little delicacies will be most acceptable; and they can enjoy them in peace, and will soon brighten up and thrive. When spring comes, they will be on a par with the rest of the flock; but not, if left to be jostled by the flock during the cold, bitter winter. The same remark is more or less applicable to all stock. The man who has pity in his heart, will not see his brute abused, to say nothing of the gain in the end.

HORSES.

Here is a bit of philosophy worth remembering:

"Horses I learned to govern by the law of love. The relation of friendship once established between man and horse, there is no trouble. A centaur is created. The man wills whither; the horse, at the will of his better half, does his best to go thither. I became, very early, Hippodamos, not by force, but by kindness. All lower beings—fiendish beings apart—unless spoilt by treachery, seek the society of the higher. Horses will do all they know for man, if man will only let them. All they need is a slight hint to help their silly, willing brains, and they dash with ardor at their business of galloping a mile a minute, or twenty miles an hour, or of leaping a gully, or pulling tonnage. They put so much reckless, breakneck frenzy in their attempt to please and obey the royal personage on their back that he needs to be brave indeed to go thoroughly with them."—[*John Brent.*

A SHEEP FARM.

On New Year's Day we took a trip to the farm owned by D. N. Barnes, Mr. Diefendorf and Cyrus L. Gorton. They have three hundred and twenty acres within three and a half miles of the city, and one hundred and sixty acres on the Stranger. From the improvements already made, in building, fences and fruit, we think these gentlemen are aiming to have the model farm of Kansas. Enough has already been done in the way of beautifying the grounds to make this farm well worthy of a visit.

They have a flock of twelve hundred and twenty-five sheep, and it is good for the eyes to look at them. Thirty of them were bought in Vermont,two hundred in Michigan, and four hundred in Iowa. Some of them are as "proud as a sheep" of their lineage, wear the daintiest fleeces, and cost as high as two hundred and fifty dollars each. These are the Spanish Merino, the Paular Merino, the French Merino and the savory South Downs.

Mr. Barnes prefers the Spanish Meripo for this latitude, and raises only from that. They are hardy, compact in form, shear more than the French Merino. and cost less for keeping.—His Spanish Merino ewes sheared from six to seven and one quarter pounds each, of washed wool. The bucks sheared from thirteen and a half to fifteen and a half pounds of washed wool.

The fine sheep shear about twice as much as the coarse, and fine wool is usually thirty per cent. higher than coarse wool.

He expects to shear 5,500 pounds of wool in the spring. At fifty-five cents per pound, this wool will bring in the pleasant little income of $3,025. And, in addition to the wool, there is a fifty per cent. increase in lambs. Last year Mr. Barnes raised three hundred lambs from five hundred sheep, and next spring he counts upon seven hundred lambs.

The cost of keeping sheep in this State is less than one dollar a year each.—[*Leavenworth, Kan. Conservative.*

Doctoring Stock.—It is bad business to be doctoring your stock—bad, because it shows you are neglectful (generally speaking); bad, because it seldom cures; bad, because it is disagreeable, both to the man and the brute; bad, because it costs both money and time.—Doctoring is bad business generally, both to man and to beast. It is, however, hard to make you believe it. The human mind is naturally inclined to quackery, a sort of superstition, and the farmer has his share of it.

FEED FOR FARM HORSES.

W. R. Lewis, Esq., of Milford, Mass., gives in the *American Agriculturist*, the following hints upon the management of farm horses:

When I was a boy, in the north of Vermont, we used to feed dry hay and oats, unless the horse had the heaves, which was very common among them at that time, owing to feeding too much dry hay and oats, and driving them too fast when full. We then supposed they ought to have hay before them all the time. This is a false idea; all kinds of animals will do better on regular meals. Farmers usually feed too much dry hay. You may keep a horse eating all the time, and not have it thrive. I came to Massachusetts about twelve years ago, and was engaged in the teaming business about seven years. I began to feed cut hay and corn meal, and found the horses would do more work and last longer, and be in a better condition than when kept on dry feed. Cracked corn and oats make a very good feed for noon, when in a hurry. I would feed carrots all winter in small quantities, especially to young horses and breeding mares. This keeps them in a healthy condition. Team horses may be fed on them once a day to advantage. I am not able to state the amount each horse should be fed; this depends on the size and age of the animal. I would advise all owners to keep their horses, especially those they use, in good condition; it costs less in the end. Colts ought not to have much grain unless very thin in flesh; they are often injured by graining. A few ground oats, with hay or straw, wet and mixed, and a half pint of ashes added, once in two or three weeks, is all colts need, besides hay. The ashes keep the bowels open, and, it is said, free from worms. If living in Maine or Vermont, where hay and oats are cheap, I would have the oats ground, and cut a portion of my hay and straw to mix with what grain I fed, and consider myself well paid for the time and trouble.

To Kill Lice on Stock of All Kinds.—Take one ounce of cocculus indicus, which should be bought of any druggist at from 12 to 15 cents per pound, and steep it in one gallon of water, and apply it as is recommended for tobacco extract. It will be found quite as effectual, and much more pleasant to use. I have used it with unvarying success for killing lice on canary birds. Dip them in, keeping the head out, and soak well. It is perfectly safe.

Raising Pork.—The Hon. H. L. Ellsworth, formerly Commissioner of Patents, made a well regulated series of experiments in the feeding of hogs. He found that washed and unwashed, and curried and not curried hogs, seemed to flourish equally well. In all of his pens, the hogs could wallow, if they wished, in water at the lower end of the pen, but the more elevated portions were floored, and so arranged that fluid manures could run to the lower or uncovered portion. In the feeding, however, he found that with cooked food he could raise hogs at far less than half the cost, as they consumed much less than half the quantity. Mr. Mason of Somerville, N. J., made similar experiments and with corresponding results.

How Long Should Cows Run Dry?

That depends altogether upon circumstances. We have known cows to give milk the year round. Such a cow is the cow for a poor family, or where but one is kept. In dairies there should be about two months, or from two to three. This is commonly the practice with dairymen. It keeps the cows better during the interval; gives them a chance to recruit for the calving time: though an increase of feed will do this, where the cow is milked till within a short time of calving. It has not been proved to be true that it will hurt a cow to milk nearly or quite the year round. An increased amount of food, or good food, is all that is necessary. It is the feeding and good treatment of cattle in all cases that make good stock, of whatever kind; and that is the great secret.—Then milk as long as you please. It is a habit, also, whether you let your cow run dry long or not. You can in a few seasons make the difference of a month. There is testimony enough to this effect. Let those desiring, milk as long as they can, and feed well, feed variety, give the little-or-nothings, which a cow so well likes, and the good housewife so well understands.

WOOL GROWING AT THE WEST.

This branch of stock-growing is receiving largely increased attention throughout our Western States; partly caused by the war and increased demand for wool, consequent and partly owing to the partial failure and low price of wheat, and to the fact that pork sells low compared with former years. In this increase of sheep, as we predicted in this journal three years ago, no hindering cause has been found, no new enemy developed. The present year has been a remarkably wet one, and yet sheep, in larger numbers than ever before, have pastured the prairie in perfect health.

Many farmers, almost unacquainted with sheep and wool growing, have invested in flocks the past summer. The coming winter may prove a dear "experience school" to them, and cause them to wish their money back.

In sheep growing, there are three distinct sources of profit sought, viz: increase of number by natural propagation, growth of increase in size and weight, and annual product of wool.—The fattening of sheep for mutton exclusively constitutes a branch of business by itself.

The three objects above noted are the chief aim of Western sheep growers. The ewe used in breeding should possess, as nearly as possible, the points of excellence desired in the offspring. They should at least be one year old, of good, strong constitution, and have air, exercise, and healthful diet. The lamb will thrive finely if the dam be strong, healthy, and a good breeder. Prairie storms are exceedingly severe on lambs, and they require good shelter, dry under foot. Those farmers who have discarded swine for sheep should bear in mind that a hog-reeve and shepherd are quite separate occupations. The hog, though native of a *warm* climate, will thrive if well fed without shelter; the sheep will suffer far more, and its increase frequently perish.—The ewe, healthy, well fed, and sheltered, will generally realize the fond hopes of the shepherd for increase. Growth afterward is natural, easy, and rapid. Good health is necessary, which requires dry pastures and proper food—subjects for study not easily exhausted.

The annual product of wool depends much upon the health of the sheep, both for strength and beauty of fibre, and also weight of fleece.

The three sources of increase above named closely looked after, and there will be small chance of failure in making wool or sheep growing a remunerative branch of Western husbandry. We have the summer range without limit, and winter forage superior and more abundant than any other portion of the earth visited by us. Let it no longer be said the prairies are unsuited to the production of sheep and wool.

SOMETHING INEXPLICABLE.—Hon. Zadock Pratt, of Green Co., N. Y., well known to the world, has the following in the *Country Gentleman*:

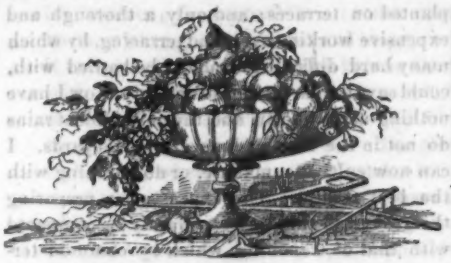
'Last year, the stalks of sowed corn, when fed to the cows, increased their milk; but when fed on pumpkins, did not. This year, the reverse is the case, the season being about as usual.'

Here we have reliable authority, and a reliable statement if carefully and accurately tested. Does not this account for the variations of opinion on the subject of feeding stock? But we are inclined to think the Hon. Z. Pratt left, unobserved, some facts bearing on the case. Who will test this matter?

GREAT AGE OF A HORSE.—Wilkes' Spirit of the Times, gives an account of a small black Galloway, eleven hands high, which attained to the greatest age of any horse of which we have any record. He was a resident of a small village near Haddington, in Scotland.

He was foaled in 1720, and at the time of his death he was 69 years old. Moreover, he was hale as well as old. A few weeks before his death he trotted for several hours at the rate of seven or eight miles an hour, and fed well in his oats and hay to the last.

Don't let winter get the start of your cattle, as it is a bad time to fetch up. Watch them, for they suffer and never tell of it.



HORTICULTURAL.

A List of Peaches for Market.

We have received a private letter from Mr. J. B. Fawcett, of New Albany, Ind., giving us a list of peaches for market purposes. Mr. Fawcett has had considerable experience in cultivating the Peach for the Louisville (Ky.), and other markets, and his opinions are entitled to confidence. He also describes some varieties that are new to us. The letter will be read with interest by all interested in the culture of that most luscious of fruits—the Peach.

Mr. N. J. Colman:—Yours of Jan. 6th I have received, and will give you what information I can. Were I going to plant an orchard of Peach trees expressly for market, containing ten varities, I should select something like the following list:

Troth's Early Red, Serrate Early York, Crawford's Early, Huffman's Favorite, Large Early York, Windsor Seedling, Old Mixon Cling, Crawford's Late, Grosse Mignonne, Columbia.

These ten varieties carry us through about ten weeks, and with us commence ripening from the 12th to the 15th of July, winding up the last of September.

Now were I going to plant the number of trees you propose to plant, I should make the number of varieties something like 15 or 18; although I am greatly in favor of but few kinds, and let those be well selected. My experience has taught me that *Clings* soon glut the market, and prices range low, while fine *Freestones* are always in demand at fair prices. But still I think clings are gradually gaining favor, and some of the choicest varieties I would not be without. The Old Mixon Cling has proved to be such with us: and just here I will mention a cling that certainly deserves a name, but as yet we have none for it. My father procured the buds of a neighbor. It is decidedly the handsomest peach in the orchard, and when in market always collects a crowd, and sells at high figures. When fully ripe, they are very large, rich and juicy; the color is different from any peach I ever saw, it is a light, golden color with a rich blush; ripens just after Crawford's Late; and had I 5,000 trees well loaded I think I should meet with a ready market.

I will say here, that yellow-colored peaches do not sell so well as flesh-colored, and are generally much more tender, thin-skinned, &c. The Large Orange and Yellow Rareripe are of this class. The Large Orange is one of our fine varieties, but too tender for shipping; size (when not allowed to bear too full), equal to Crawford's Early; color, dark yellow, with deep red blush; quite acid.

The Windsor Seedling, is one of our best and most profitable peaches; very prolific; size 2; color, light yellow, with rich blush; very sweet.

The Chancellor Cling, resembles the Pine Apple Cling and old Mixon, but smaller than the latter and a great bearer.

Huffman's Favorite is decidedly the most lucious peach we grow, admitted by all. It resembles the Large Early York, for color and size, but shorter. It ripens just before that peach, and is much sweeter and more juicy; very firm, and fine for shipping; altogether one of the very best.

I have inserted this list in the order they ripen with us. The Early Tillotson has been one of our most profitable peaches, and contrary to a statement in one of the numbers of the *Valley Farmer* it has proved a great bearer with us; but generally more or less knotty and wormy. The White Sweet Water I think one of the best, but have not fairly tested it yet. Old Mixon Free, I take to be a profitable peach, but cannot say from experience. The Grand Admirable Cling, we would not be without, I think it equal to Old Mixon Cling for marketing. It is of fine size and high color, and altogether very showy. I have added the Columbia to the list of 10, because it has proved one of our fine peaches in this latitude, and is a fine market variety. Had I the selling of the fruit, and wished but 10 varieties, I should rather have the Grand Admirable Cling; it ripens at the same time, the last of September.

New Albany Indiana. J. B. Fawcett.

☞Under the head of "The Want of Small Birds," an English paper mentions the great damage done to plum, cherry and other fruit trees in that section by the green caterpillar.—"In some places," it says, "the trees are quite shrivelled up, and sapless and withering, as though a blast from a hot furnace had swept across them."

[Written for the Valley Farmer.]

On the Culture of the Grape Vine.

BY DR. LOUIS L. KOCH, GOLCONDA, ILLS.

Preparation of the soil for the reception of the Grape Vines. I. BY TRENCHING.—Trenching consists of turning the soil over generally to the depth of about three feet, whereby the sub-soil is exposed to the action of the atmosphere and made highly inducive to the welfare of the roots; while the surface soil which is turned to the bottom has a highly favorable influence to the deeper-growing roots, and is by these soon penetrated, and thus insures to the young plants a vigorous and thrifty growth the first few years.

Besides the high cost of trenching, which can hardly be accomplished for less than $80 per acre, I deem it only desirable for plants which draw all their subsistence from the trenched soil and never grow any deeper than it, such as asparagus and nursery trees. Whereas large trees and plants with deeper growing roots as soon as they have reached the depth of the trenched soil, show a very perceptible falling off in their fine and thrifty growth.

In soil that is inclined to be wet the water gathers very fast at the more shallow parts of it. The hard sub-soil prevents its abduction and the surface soil cannot absorb it all, the soil will consequently turn stagnant and sour and become very injurious to the young and tender fibres and greatly retard their healthy development. As a general thing a vineyard planted on trenched soil gives us far greater hopes of future success, by their fine growth the first few years, than we see, for reasons before mentioned, afterward fulfilled.

II. PREPARING THE SOIL BY TERRACING AND DIGGING HOLES.—I consider our object far better and more effectually fulfilled by this method than by trenching, without calling special attention to the far greater cheapness of the former over the latter. To be sure terracing will not admit the use of the plow, which is used so frequently in vineyards; but, even where the nature of the soil will admit its use, it is hardly advisable to do so. The heavy and violent rains of our latitude, (in addition to the great per centage of calcareous loam which is greatly addicted to washing, and of which most lands in our Western States consist,) very often wash away the surface soil made loose by the implements of agriculture and the manure you may have put there, and therefore make useless the working of it, and it not seldom happens that deep, *hardly curable* gullies are washed to the great injury of the vineyard. All the above-mentioned evils made themselves apparent in my first vineyard, which was not planted on terraces; and only a thorough and expensive working over, and terracing, by which many hard difficulties had to be battled with, could save it from utter destruction. Now I have nothing more to fear, and the most violent rains do not in the least endanger my vineyards. I can now cultivate, manure, or do anything with the best results. The expenses for preparing the ground in this way can hardly be compared with that of trenching, which by common terraces can hardly exceed $20 dollars per acre.

The holes are dug in this terraced ground for the reception of the vines; they should be 2 feet wide, 3 feet long and 1½ deep. The distance apart depends upon the kind of grape vines planted. I deem 6 feet distance in the direction of the terraces by 8 feet in the other way, or 6 by 8 feet for the most desirable distance; and only in very poor or very rich soil, thrifty varieties of grape vines, or such as may by their nature be very slow growing, may demand a variation more or less from this rule. I dig my terraces in blocks 6 or 12 feet wide according to the plane or inclination of the ground, so as to correspond with the distance of planting. If it is intended to plant the vineyard in the fall, it is necessary that the terraces should be made and the holes dug at the end of August or the beginning of September so as to decompose the thrown-up soil and give the atmosphere admission to the inside of the holes. In digging the holes, the upper half or surface soil is thrown to the left hand side, while the lower half or sub-soil, is thrown to the right. In planting, the soil to the left is thrown into the hole first, whereby the roots will find fertile soil, while the sub-soil, or the soil to the right, is thrown on top so as to expose it to the action of the atmosphere and thereby make it fertile. By throwing the sub-soil to the right, planting is accelerated; because if you want the desired result it becomes absolutely necessary to use your right hand for the spreading and covering of roots, by which the ground to the right, which should be well pulverized, comes very handy.

III. PLANTING.—I take it for granted that for the welfare of a vineyard none but well-rooted plants are taken. I utterly condemn the practice of planting vineyards with cuttings, the greater amount of cash that must be paid for well-rooted plants will pay for itself with interest in a very short time.

Whether planting is done in the spring or in the fall, it should always be done when the ground is comparatively dry: It can in this way when it is lose and mellow be worked much eas-

ier in among the roots. This cannot possibly be done when the soil is wet and cloggy, where it makes very bad work. The hole is filled up with the soil to the left or surface soil high enough to leave sufficient room for the roots of the plants up to the lowest eyes. The plant is inclined to where the trellis or stake is afterward to be placed. The roots of the lower joint which have been trimmed a little are now spread out and covered with ground up to the next joint. The roots of the second joint are treated the same way as those of the first; so are those of the third. As the eyes nearest the roots contain the most vigor and vitality, I cover the top roots but a few inches with soil. After the vine is planted in the described manner I cut it back so as to let only one, or at most two eyes appear above the ground. I never found it advisable to leave more eyes on, and I always found those eyes nearest to the roots most certain to grow, although they may sometimes have been very deep under the surface of the ground. As the plan of soaking in, which is to be praised highly, cannot well be carried out when planting is done on a large scale, I tramp the ground gently to to the roots, instead of it, so as to make it adhere the more closely to it. The rest of the ground I fill in so as to leave a shallow hollow around the plant, in which the rain will gather and prevent the plant from suffering from drouth. With this treatment it is seldom that a plant fails to grow even in a hot, dry summer. By good care they will grow four feet and over the first season.

To protect the young vines from injury, a stake of about two feet long is stuck to the head of each plant, which will prove very useful the first and second years, after which they will not need this protection any more, thus calling the attention of the laborer, who may be working in the vineyard, to the plant, and thus prevent its being cut by the hoe, or being tramped upon.

When to Gather Apples.—Apples should be gathered late. This insures their brittleness and solidity. An apple, left on the tree, will stand a great amount of cold. Hard frosts that freeze the ground so that it cannot be plowed, will not hurt an apple. We gathered apples to-day (Nov. 21) in the finest possible condition. Such apples are mature and fully ripe. We have reference now to late ripening apples. Of course earlier fruit must be gathered sooner. But let an apple get fully ripe, that is, full grown, if possible, before it is taken off the tree. F. G.

Never borrow if you can possibly avoid it.

Analysis of Wines, Grapes, &c.

We have received the following letter from the Department of Agriculture, Washington, D. C., which we lay before our readers. All of our Vintners who feel disposed can follow the within directions and send their samples for analysis. We hope many of our readers will forward samples from Missouri, for we believe that when the wine of this State is analyzed, it will be found superior to that of any other State. Missouri wine thus far at the different trials in the United States has won an enviable reputation, and Missouri soil by analysis has been proven to be rich in the materials of which the grape should feed upon to produce wine of the best quality.

Department of Agriculture,
Washington, D.C., Jan. 12, 1863.

N. J. Colman, Esq:—It is designed by this Department to commence and perpetuate a system of Experiments in the Analysis of Wines, Soils and Grapes from various sections of the States: to this end, therefore, we write you, asking of you to procure and forward us from your own manufacture, or that of some other wine grower near you, samples of—say, two bottles of each variety of wine you have made from native grapes. Please be particular in labelling the bottles, so that we may know the year in which it was made, the kind of grape used, and, so far as you can, state whether any, and if so, how much, sugar was used to the gallon. Please send us samples of different years. Will you also send us samples of the soil of the vineyard from whence the wines were made. To this end we suggest that you take a slice of the soil downwards as deep as your drainage, mix it all up thoroughly, and send us one quart of the mixture. This will furnish a general average. Will you also write us of the general character of the soil, its surface soil and depth; the subsoil and underlying base. Please also state the position of the vineyard, whether laying to the south, on level or side hill, etc., and any other items that your good judgment may suggest toward assisting us in reaching a basis for a future report upon the position, soils, climate, &c., as connected with grape growing as a wine crop. We shall also desire to obtain grapes from the same vineyard in the fall. Very Respectfully,

Isaac Newton, *Com.*

Earn money before you spend it.

Never run into debt, unless you see a way to get out again.

Never speak evil of any one.

Keep yourself innocent, if you would be happy.

HOW TO GROW CELERY.

The *Prairie Farmer* contains the following:

The method adopted by Mr. Sam. Waters, the landlord of the *Pennsylvania House*, Urbana, Champaign Co. in this State has produced the best results of any that we have seen. He has succeeded in blanching the stalks of this plant to the length of three and four feet, and producing celery at once gigantic, fragrant, delicious and tender. For the benefit of your readers, I have obtained from a neighbor of his, old man Higgingbottom, the following account of the process:

WHEN AND HOW TO PLANT THE SEED.

Plant about the 1st of April, thickly, in drills four or five inches apart, in a bed previously prepared of a compost of ashes, chip and old barn-yard manure. This compost favors the germination of the seed, which, like all small seeds, is rather difficult to start. Tobacco plants are seldom raised except from a bed largely composed of fresh ashes.

FIRST TIME TRANSPLANTING.

When the plants have achieved a growth of four or five inches, they are transplanted into a bed prepared as the first, and allowed to stand in rows six inches apart and the same distance between the plants. This work will require to be done some time in May or early in June, according to the season, and is calculated to make the plant stalky and throw out lateral and fibrous roots and so hasten its maturity.

TRANSPLANTING INTO TRENCHES.

This work will require to be done between the 15th and 25th of July. About the 1st of July prepare a trench as follows: Throw out the soil six inches deep and from 24 to 30 inches wide, and fill with a compost of about one-fifth ashes and four-fifths chip and old well-rotted barn-yard manure. Spade this trench over, thrusting the blade down to the handle and thoroughly mix with the soil beneath, and with a rake and fork make a mellow, fine deep bed. Then let the bed remain a week or ten days, and spade it over again, commencing at the end of the trench at which you left off, at the first time spading. Rake, knead and pulverize as before. By these processes the soil is not only rendered friable and tender, but any fermentation that may have been going on has been accelerated and finished—than which nothing is more destructive to germination or to the rootlets of young plants.

The trench being ready, the plants are then taken up, the leaf stalks except the heart stripped off, the heart stalk clipped off at the top, and the root cut off within an inch of the crown. The plants are then carefully assorted as to size and set in the trench with great precision. Mr. Waters then carefully cultivates with a gardener's trowel and as often as twice a month runs his trowel down and cuts off the fibrous roots all about the plant. Cutting these lateral roots seems to operate in the same way that the plow operates in the cultivation of Indian corn.

EARTHING UP, OR BLANCHING.

On account of the great heat not unusual in our climate, the first half of September, Mr. Waters does not commence earthing up until the middle of the month. This is done at first by seizing the plants in one hand and drawing up with the trowel, the earth with the other, taking great care to prevent the earth crowding about the heart of the plant, so as to smother it, and taking care, too, to have above the top of the trench, enough of the stalk to keep a healthy balance between the powers and influences of the earth beneath, and the air and the sun above. As this process advances, the assistance of the spade is called in, and if the work is dexterously, as to time and manner, done and performed, before the end of an ordinary season, the plants will have obtained a length of from three to four feet.

RECAPITULATION.

Mr. Waters' (old man Higgingbottom thinks) successes are due to his care on the following points:

1. He insures the germination of the seed by a special provision.

2. He transplants the first time to obtain strong and stalky plants, and gets it into a habit which concentrates its energies about the crown.

3. He strips off the outer stalks so as to secure the vigorous growth of the inner, and to prevent their smothering, and cuts back the root and confines its energies to a narrow space, so that the shock of transplanting the second time is greatly modified, and the plant pushes with great vigor.

4. He cuts the lateral roots and gets an immediate growth, which is past our philosophy to explain.

5. He blanches by heaping up the earth about the plant, instead of planting out in a ditch.

SOMETHING ELSE.

Mr. Waters prefers the solid red celery and the solid white to either of the many other kinds, and says that if his method of blanching is adopted, the trenches should be eight feet apart from centre to centre.

RABBITS DESTROYING TREES.

ED. VALLEY FARMER: I have a large orchard of young trees and the rabbits have eaten off the bark of nearly every tree as high as they can reach. I fear the trees are ruined. Will some of your intelligent correspondents tell me what to do now to prevent the trees from dying. Also will they tell me how to prevent future loss by the rabbits in the same way. I wish to plant an orchard of five or six thousand trees in the spring, but my loss by the rabbits has almost discouraged me. There is no use of planting trees for the rabbits to kill. I do hope some of your readers will tell me of a sure preventive to their ravages. J. S. W.

[REMARKS: Our correspondent has touched a subject of very considerable importance, and we join him in asking those who have experience to give us an effectual remedy. Applications of blood on the bodies of the trees are said to be effectual remedies. But it seems to us some enterprising man could get up a cheap contrivance for encasing the tree, say 18 inches high, which would certainly be an effectual preventive. The covering of the body of the tree would produce

no injury—but be beneficial. It should be something that would expand with the growth of the body of the tree. They could be left on during the summer or pulled off in spring and again applied. Some elastic substance would be best. We have heard of the pawpaw bark being peeled in spring and put away till fall and then applied. But we have no experience with it. If any have they will confer a favor by telling us how it should be treated. For a few trees it would doubtless be admirable—but where thousands are to be protected, something less cumbersome should be had, if possible to obtain it. We hope that our readers, if they have had any experience or can shed any light on the subject, will not be slow to speak out.—*Ed. V. F.*]

Fruit Growing in Kansas.

Having shown in my last communication that fruit can be grown in Kansas, the next important question is, "Will it pay?" We answer this question unqualifiedly in the affirmative.—First, it will pay to plant and raise the trees if we never expected to gather fruit therefrom. The shelter they furnish from the severe and almost continous winds of autumn and spring—their cool and delightful shade in mid-summer—and, above all, the relief they furnish for the tedious monotony of prairie scenery, more than compensate for the labor of raising. Who that has ever traveled over these beautiful rolling prairies, adorned with such an endless variety of vegetable annuals, has not sadly felt the need of more perennials? As a lone house is dicovered on some far off high divide, with not a tree or shrub to beautify its surroundings, with what vivid imagination do we paint the change that would come over that dwelling by the presence of a thrifty apple or peach orchard in full bloom.

If we are looking for a place to locate, with what strong impulses are we drawn toward that neighborhood where these unmistakable evidences of good taste, thrift and industry are to be found. In near proximity to that cottage whose white walls are already shaded by the transplanted elm, linn, locust and cottonwood, and whose rear and front, right and left, are nicely studded with apple, pear, cherry, peach and plum, how sure are we to find in some naturally sheltered and perhaps artificially shaded and watered enclosure, a substantial school and meeting-house, and how readily will the man who has no children to educate, and is seldom seen inside a church, pay double, yea quadruple, for a farm within the boundaries of such a district!

Secondly—It will pay to raise fruit in this country as a most luxurious and healthful portion of our food.

Depraved and morbid indeed must be that taste that does not relish good ripe apples, peaches, pears, &c., and that doctor must be an old fogy who does not admit that they are the most wholesome articles of diet within the range of human knowledge. Among the substantial improvements in medical teaching within the last half century, none have been more salutary than that allowing the free use of cold water, and nearly all kinds of ripe fruit, in almost every form of disease.

Never shall I forget the impression made upon my mind at a very early period of my life, by the directions given my mother by the family physician, as she sat weeping over the cradle in which I had lain for a number of days in a hopeless condition. Now said he, don't you give that boy one drop of cold water, and you had better keep these strawberries out of his sight. In a few hours my brothers and sisters returned from the meadow with a pail overflowing with the delicious fruit, and supposing me too far gone to observe anything in the room, the berries were left near my cradle. I soon opened my eyes upon the tempting delicacy, and in a few unobserved moments filled my parched mouth several times with the cooling beverage, (for they were really like water on my dry and parched tongue). In a few hours I broke out in a fine perspiration. My tongue, which had been rattling on my teeth, became moist, and when the doctor came he said my fever had turned—the calomel had produced its desired effect, and I should probably get well.

It is a law of our physical organization that no material change can be made in the kind or quantity of food taken into our stomachs, without producing more or less derangement of the digestive organs. This every intelligent farmer understands when applied to the feeding of stock, and yet on the first appearance of fruit, he will allow his children to satiate an appetite rendered voracious by long abstinence, and when vomiting, diarrhea, dysentery, &c., follow, fruit is considered very unwholesome. I have lived over twenty years in one of the largest fruit-growing counties of Michigan, and during that time have had extensive opportunity to witness the effects of fruit-eating both in sickness and health, and give it as my unqualified opinion that peaches first, and apples next, are the most natural aliment that ever entered the human stomach. As they come but once a year, and last but for a limited time, their use should be entered upon with caution.—[*Cor. State Record, Kan.*

Where to Plant Apple Trees.

They grow best in low, rich soils, as will anything else. But yet, this is not the soil for apple trees, nor fruit trees in general. The frost takes them (when in blossom), more readily; they have less air (wind promotes growth of vegetation); and bear better generally—not always—for they are more exposed to the long, cold, spring storms. But they bear better on an upland generally; have healthier and better flavored fruit; and are more free from insects. The curculio affects a tree less on a hill than in a valley. Rocky ground is favorable to trees—at least proportionately more so than to grain.—You can grow a tree on soil so rocky that it will not admit of cultivation. Plant your trees then upon good, rocky, upland ground, if you have it. Avoid the valley, if possible, under any circumstances. We have seen enough of this to satisfy us that this is good advice. A tree will grow well in rocky soil.

The Way They Make Hot-beds in Germany.—Take white cotton cloth of a close texture, stretch and nail it on frames of any size you wish; take 2 ounces of lime-water, 4 ounces of linseed oil, 1 ounce of white of eggs, 2 ounces of yelk of eggs, mix the lime and oil with very gentle heat, beat the eggs well separately, mix them with the former; spread the mixture with a paint-brush over the surface of the cotton, allowing each coat to dry before another is put on, until they become water-proof. The following are the advantages this shade possesses over a glass one:—First, the cost is hardly one-fourth. Second, repairs are easily made. Third, they are light; they do not require watering no matter how intense the heat of the sun; the plants are not struck down or burnt, faded or checked in growth; neither do they grow up so long, sickly and weakly as they do under glass, and yet there is abundance of light. Fourth, the heat arising entirely from below is more equable and temperate, which is a great object. The vapor arising from manure and earth is condensed by the cool air passing over the shade and stands in drops on the inside, and therefore the plants do not require as frequent watering. If the frames are large they should be intersected by cross-bars about a foot square to support the cloth. These articles are just the thing for bringing forward seeds in season for transplanting.—[*Ex.*

Hale's Early Peach.—This new variety, which has already excited a good deal of interest on account of its extreme earliness, will, we trust, have its character in this respect more fully proved another year. F. R. Elliott of Cleveland, Ohio, where it became first known, stated before the American Pomological Society at Boston, that it was a week earlier than the Early Tillotson, and as large as the Serrate Early York. A correspondent of the *Gardener's Monthly*, in a late number of that paper, states that he has fruited it two years under very unfavorable circumstances, that it is a white fleshed peach of good size, equal to any peach in cultivation in quality, and from ten days to two weeks earlier than Serrate Early York.

The Tillotson and Serrate Early York usually ripen at the same period, but the Tillotson, is somewhat variable, and is sometimes earlier and sometimes later. Various influences will often modify by several days the first single reports of the time of ripening new fruits—witness the contradictory statements of maturity of the Delaware, Diana, Concord, and other grapes; but on the other hand, an old peach tree usually matures its fruit sooner than a young one, and we cannot therefore but strongly hope that Hale's Early peach may give us fine ripe dishes of this fruit before the time that we have hitherto enjoyed this luxury.—[*Co. Gent.*

[Reported for the Valley Farmer.]

Meramec Horticultural Society.

Allenton, Jan. 1st, 1863.

The forty-ninth monthly meeting was held in the school house; President Morse in the chair.

The minutes of the previous meeting were read and approved.

President Morse thanked the members for their kindness, and for the aid they had given him in the discharge of the duties of his position during the past two years, and urged the importance of a careful attention to, and record of, the facts that came under their observation, and showed the necessity of keeping up and extending the interest in Horticultural pursuits in the community, and introduced the new President, Dr. J. B. H. Beale, in a few well-timed remarks.

President Beale, on taking the chair, thanked the Society for their kindness and the confidence reposed in him, and although it had been customary to deliver an inaugural address, desired to be excused.

A. S. Redfield presented a bottle of Catawba wine from Mr. C. Pafrath, accompanied with some remarks upon the vineyard of Mr. P.

President Beale then announced the following as the Standing Committees:

Fruit.—L. D. Morse, A. W. McPherson, J. S. Seymour.

Flowers.—W. Muir, E. Vaughn, B. Arnoldt.

Vegetables.—T. R. Allen, P. M. Brown, L. D. Votaw.

It was, on motion, Resolved, that the President appoint four members to prepare essays upon such subjects as they may think proper to be delivered before the Society, at the meetings in February, May, August and November; whereupon the President appointed the following members to furnish essays, in the order named: T. R. Allen, L. D. Morse, A. W. McPherson, E. Vaughn.

The Fruit Committee presented the following Annual Report.

"Your Committee present, according to instructions, this Annual Review of our monthly exhibitions. After quite a thorough examination, we find but a small proportion of our members have been, what should be termed, regular exhibitors of fruit during the past year. Of apples we may name, P. M. Brown, T. R. Allen, L. D. Votaw, Wm. Harris, Wm. Muir, Mr. Davis, and Dr. McPherson, as being entitled to credit about as they stand in the list; Mr. Brown having excelled in the exhibition of apples.

"Mrs. J. C. Blakey, Mr. Seymour and the Secretary have been the only rivals in pears. Mrs. Blakey stands highest on the list. In the exhibition of grapes, Mr. Seymour has beaten us all badly.

"As to strawberries, we are not prepared to say who is entitled to most credit, there being such a large display, the tables so much crowded, and so many exhibitors, that we cannot say who was entitled to most credit. At the June meeting nearly all did well in strawberries.

"Peaches and plums of the finer sorts were almost a failure the past year, so that there was but little opportunity for rivalry in their exhibition.

"We find it very difficult to decide who has been the most valuable contributors, but bring the number down to five, about in the order named: P. M. Brown, T. R. Allen, L. D. Votaw, Wm. Muir, and J. S. Seymour, and recommend that the above-named gentlemen receive a vote of thanks from the Society for their regular and valuable contributions during the past year."

A. W. McPherson, Ch.

The Annual Report of Flower Committee was as follows:

Your Committee report, that, according to instructions, they marked the contributors in their proper order of merit at each meeting, and find Mrs. J. S. Seymour is classed No. 1 the greatest number of times. The bouquets of Mrs. Dr. Beale have always been prized for the taste in their execution and the rarity and selectness of the flowers, and beg to recommend that an Honorary Diploma be awarded to Mrs. J. S. Seymour for her regular and valuable contributions of flowers to the Society. WM. MUIR, Ch.

The Chairman of the new Committee upon Flowers, announced that he would give as a premium to the best and most regular exhibitor, a select Green House or Hardy Plant, as the exhibitor might prefer.

Dr. McPherson stated that he would give twenty-five apple trees to the most regular exhibitor of apples.

The Executive Committee informed the President that they had elected Mr. T. R. Allen, Chairman.

Mr. T. R. Allen said that this being New Year's Day, Mrs. Allen desired the members to take dinner with her, and he therefore moved that the meeting adjourn for that purpose. Adopted.

The meeting being called to order, the Fruit Committee presented the following report:

The Fruit Committee reports as exhibited by Dr. McPherson very fine samples of Janeton in good condition. By Judge Becker remarkably fine and large Winesap, Pryor's Red, Ortly, American Golden Russett, Janeton, Pennock, all very large, and one sample not known, named by Judge B. Caldwell.

By Mr. Detweiler, Ortley, and several samples not known. By A. S. Redfield, Baldwin, Campfield, hardy apple, and others unknown.

By Mr. Detweiler, pear unknown, and not ripe.

By T. R. Allen, Janetons and very large quince.

L. D. MORSE, Ch.

The Executive Committee reported as a subject for discussion at the next meeting, "What is the best apple to plant for market, and the best way to plant it?" Adopted.

It was, on motion, RESOLVED, That the Society determine to hold an exhibition next fall, and that the members be urged to make every exertion to insure a full display themselves, and to induce the community at large to take an interest in it; whereupon, the President appointed P. M. BROWN, Dr. MORSE and L. D. VOTAW to assist the Executive Committee in making the necessary arrangements.

Dr. Morse called the attention of the Society to the sample of wine presented by Mr. Paffrath, which was tested, when it was RESOLVED, That this sample of wine is a very inferior article of Catawba, apparently owing to some defect in its manufacture. Adopted.

Dr. Morse, in calling attention to this sample of wine, said he took a deep interest in the subject of the growth and manufacture of wine in this neighborhood, and although this sample did not come up to his expectation, he thought that the growth and use of home-made wine would be of vast benefit to the community morally and physiologically. It was a point conceded that man in frequent circumstances required stimulus, and the substitution of a healthful for a deleterious article was something much to be desired. His attention had been particularly called to this fact from the examination of some hundreds of individuals during the past few months, among these he found a vast number of cases of chronic debility arising from diseased condition of the digestive organs, creating a jaundiced state of the system, foted breath and weakness generally. Continued exertion by such persons gave rise to the need of an artificial stimulus, and the one most easily obtained was spirits in some form and generally of bad quality. The habitual feeling of want give rise to habitual use, and produced derangement and debility, and it was his opinion, and that of many eminent physicians, that nothing was more effective as a remedy in these cases of debility than the light wines from their constituents, and it was equally valuable as a preventive. In this view he desired to see the home-made wine in extensive use in the place of the deleterious articles now so common and so fatal in their effects.

The President announced that the next meeting would be held in the school-house, Eureka, on the first Thursday of February. WM. MUIR, Sec.

GREAT YIELDS OF FRUIT.—One thing we should guard against—the great fruit stories, enormous yields, &c. It is the *year*, the *season*, that has to do with it in most cases—and not what the producers of great crops claim—a specialty. There are "great" crops the country through in a good year, such as the past was. Give us great crops when your neighbors' fail; that is what is wanted. Then you will set a pattern—you will have one to set.

LARGE APPLE TREE.—We have seen some large apple trees in our days—we have one ourselves; but here is a sticker: Hayward, says the *Farmington* (Me.) *Chronicle*, speaks of an apple tree in Duxbury, Mass., which was upwards of 100 years old, was 16 feet in circumference eight inches above the ground, and which produced in one year fruit from which 10 barrels of cider were made, besides 30 bushels of apples for the cellar

SOMETHING NEW AND QUITE INTERESTING.—A Mr. Smith, of Windsor, N. B., has, for many years it is said, been in the practice of setting apple and plum scions on maple trees. Plums upon sugar-maple! think of that. The result is, an improved fruit, both of the apple and the plum. He selects small stocks, and grafts on the main or central branch, leaving a few limbs, which are allowed to grow, till the graft becomes perfectly united. The grafting is done in September. The graft is wound round with cloth of some kind as a protection against the cold. In three years the graft bears. We don't believe the story.

LOCUSTS COMING THIS YEAR.—Joseph Harris writes to the St. Clairsville (Ohio) *Chronicle*, that the locusts will be on hand this year, it being the seventeenth since their last appearence. He says:

The Pharaoh locusts made their first appearance on the wing May 19, 1846; on the 23d commenced singing; on the 31st commenced boring the trees and laying eggs; June 6, commenced dying; the males first. On the 25th all dead. (Taken from notes taken on above dates.)

This year there will be locusts in abundance. Prepare your small trees, by tying them up with straw for twenty-five days, and you are safe if you do it right.

LESS FOOD.

If people could only learn to eat less, there would be, not only less waste, and more health and usefulness, but more happiness and cheerfulness of spirit—and there never would be dyspepsia. This eating so much becomes a habit, and it is a very bad one—a vile, gluttonish habit. It is worse than ardent spirits. The drunkard will die outright, and that's the end of him; but the intemperate eater will drag out his miserable life of dyspepsia, a burden to himself and to others.

We eat too much—all of us, or pretty near all. Less food will give us more strength, as it is better digested, and is less work for the stomach, and the critical liver.

Good digestion (less food) makes a man sweet tempered; and that alone is a great gain. He will keep out of quarrels with his wife, with his children, and his neighbors. He will be less disposed to cheat and swear. He will whistle and sing, and smile his way through the world; until he comes very near being called a christian. Christianity can never prosper among gluttons, dyspeptics, and drunkards.

But this is getting to be an essay—when we only meant to say how important it is to be a little more careful in our diet. The truth is, we hardly know that we are erring here; we know not what makes us so cross at times; "blue" at other times, fretful, snapping up our neighbors, and scolding our children. It also gives us bad sleep, nightmare. And yet we suspect not the cause. Try the experiment. Do with a *little* less food for a time. The first result will be, an easier feeling, more lightness of spirits, more strength—a clearer head. This last is quite a striking thing, as all know who fast. Sir Walter Scott wrote his novels before breakfast. Before breakfast is the time to learn, as every schoolboy knows. The mind is then clear, because the stomach is empty, and the nervous influence is not required there, but through the pneumogastric nerve, invigorates the brain.

Stupidity is one of the results of over-eating. The world is full of stupid people—lazy, gormandising louts, whose god is their belly. These are sensual men—these are—yourself, in a measure. Try a *little* less food, and you will see whether we are right or not. We have had experience in this way and we have seen it in others, so that we know whereof we speak.

A little less food at each meal through the year, will amount to quite a pile at the end of it—all saved, and the man (shall we say the woman also?) be the better for it. At this rate, see what a sum would be saved to the nation; and what an amount of happiness and intelligence would be gained. But who will heed this when feeling is to be gratified? We love pleasure more than benefit. We love it more because we are miserably deluded. Somebody says, He that conquers his appetite, is more than a hero. So he is.

ABOUT DRESS.

"The first appeal is to the eye," says an old writer,—a text from which we might preach a profitable sermon on the subject of dress. We have plenty of flippant denunciations of fine clothes, and an abundance of grave animadversions on the sin and folly of extravagance in apparel, but scarcely an essay can be found touching the æsthetics and *morale* of dress. And yet it is a study worthy to be ranked among the "fine arts," not less than architecture, painting and sculpture. "Dress your boy like a blackguard," said a venerable man of our acquaintance, "and he will behave like one. Dress him like a gentleman, and he will at least try to sustain the character." It was an observation of *Lavater*, the great physiognomist, that persons habitually attentive to dress, display the same regularity in domestic affairs.

"Young women," says he, "who neglect their toilet, and manifest little concern about their apparel, indicate in this very particular, a disregard of order; a mind but little adapted to the details of house-keeping; a deficiency of taste and of the qualities which inspire love." "The girl of eighteen, who desires not to please, will be a sloven and a shrew at twenty-five!" It is a mistake in women to suppose that they may safely throw off all care about dress with their celibacy, as if husbands had less taste than suitors; or as if wives had less need than mistresses of elegant and tasteful apparel. An old writer says with hearty emphasis, "It is one of the moral duties of every married woman always to appear well dressed in the presence of her husband. Expensive attire is by no means essential. The simplest muslin gown may evince the woman's taste as truly as the most costly robe of *moire antique*. But how rare a quality is good taste! In the mere matter of propriety and harmony of colors, there is material for a treatise (which has yet to be written) by some one thoroughly proficient in the æsthetics of dress. Even the simplest laws,

though pretty generally understood, are constantly neglected. Look at the stunning glare of red, which comes from all the bonnets at the present moment—whatever may be the complexion beneath them! An English poem of the last century contains some sensible precepts respecting colors. To brunettes the poet recommends gay colors—"rose," "orange" or even "scarlet." Here is a couplet:

The lass whose skin is like the hazel brown,
With brighter colors should o'ercome her own."

To rosy cheeked girls he permits "blue" and "the color of the sea." Cautioning pale women against "vernal hues," he says, quaintly and poetically:

"Ladies grown pale with sickness or despair,
The sable's mournful dye sl ould choose to wear—
So the pale moon still shines with purest light,
Clad in the dusky mantle of the night."

Effect of Tea and Coffee on the System.

Some years ago a writer in *Blackwood's Magazine* took ground that tea was a life-prolonger, to the no little stir and surprise of the world at large. Every paper had its say in reply, generally in disparagement of the author's views.—Since then an able article appeared in the *Atlantic Monthly*, taking ground in favor of stimulants, including of course tea and coffee. And now Prof. Loomis, in the last Patent Report, says, "Tea derives its beneficial qualities, not from its direct supply of nutrition, but from its affording a peculiar substance called theine, the effect of which in the system is to *diminish the waste*, thus making less food necessary. Tea thus has a positive economic value, not as supplying but saving nutriment."

We have known people to live almost exclusively on tea for days. So also of other stimulants—alcohol, for instance. We therefore attribute it to the stimulant property, with however a leaning in favor of the *Blackwood* writer. Now Prof. Loomis confirms the theory of the Englishman. He also embraces coffee under the same head, with the same influences upon the system. He says: "Coffee, though of a taste so little allied to tea, derives its value in precisely the same manner, and from nearly the same substances. Its value and effect in the system are therefore the same as those above stated. It is here evident that milk, tea and coffee are valuable articles of food under all conditions of temperature." Here, then, is the fountain of Arethuse. We however suspect it *may* be the stimulant property—not as we find it in the beverages of the day, "rot-gut" for instance. A pure stimulant is different from bad brandy, *alias*, liquidized log-wood, *&c.* Still let us try to stick to the better theory that tea and coffee *diminish the waste* of the system. We know their effect upon us is not deleterious. It is directly upon the nerves. We have never known another effect, and we have tried to mark it carefully. Sugar will hurt some stomachs. And as this has become a sort of necessity to be used with coffee, the drink has its objections—though it may probably be used as readily without, as is the case with the Turks. Habit is potent.

MARVELS OF MAN.

While the gastric juice has a mild, bland, sweetish taste, it possesses the power of dissolving the hardest food that can be swallowed.—It has no influence whatever on the soft and delicate fibres of the living stomach, nor has it any upon the living hand; but at the moment of death, it begins to eat them away with the power of the strongest acids.

There is dust on sea and land, in the valley and on the mountain top; there is dust always and everywhere. The atmosphere is full of it. It penetrates the noisome dungeon, and visits the deepest, darkest caves of the earth. No palace door can shut it out; no drawer so secret as to escape its presence. Every breath of wind dashes it upon the open eye; and yet that eye is not blinded, because there is a fountain of the blandest fluid in nature incessantly emptying itself under the eyelid, which spreads it over the surface of the ball, at every winking, and washes every atom of dust away. But this liquid, so well adapted to the eye itself, has some acridity, which, under certain circumstances, becomes so decided as to be scalding to the skin, and would rot away the eyelids, were it not that along the edges of them there are little oil manufactories, which spread over their surface a coating as impervious to the liquids necessary for keeping the eyeball washed clean, as the best varnish is impervious to water.

The breath which leaves the lungs has been so perfectly divested of its life-giving properties, that to rebreathe it, unmixed with other air, the moment it escapes from the mouth, would cause immediate death by suffocation; while, if it hovered about us, a more or less destructive influence over health and life would be occasioned. But it is made of a nature so much lighter than the common air, that the instant that it escapes the lips and nostrils, it ascends to the higher regions, above the breathing point, there to be rectified, renovated and sent back again, replete with purity and life. How rapidly it ascends, is beautifully exhibited any frosty morning.

But, foul and deadly as the expired air is, nature, wisely economical in all her works and ways, turns it to good account in its outward passage through the organs of voice, and makes of it the whisper of love, the soft words of affection, the tender tones of human sympathy, the sweetest strains of ravishing music, the persuasive eloquence of the finished orator.

If a well-made man be extended on the ground, his arms at right angles with the body, a circle, making the navel its centre, will just take in the head, the finger-ends and feet. The distance from "top to toe" is precisely the same

as that between the tips of the fingers, when the arms are extended. The length of the body is just six times that of the foot; while the distance from the edge of the hair on the forehead to the end of the chin, is one-tenth of the length of the whole stature.

Of the sixty-two primary elements known in nature, only eighteen are found in the human body, and of these, seven are metallic. Iron is found in the blood, phosphorus in the brain, limestone in the bile, lime in the bones, dust and ashes in all. Not only these eighteen human elements, but the whole sixty-two, of which the universe is made, have their essential basis in the four substances—oxygen, hydrogen, nitrogen, carbon—representing the more familiar names of fire, water, saltpetre and charcoal.—And such is man, the lord of earth—a spark of fire, a drop of water, a grain of gunpowder, an atom of charcoal!

But, looking at him in another direction, these elements shadow forth the higher qualities of a divine nature, of an immortal existence. In that spark is the caloric which speaks of irrepressible activity; in that drop is the water which speaks of purity; in that grain is the force by which he subdues all things to himself, makes the wide creation the supplier of his wants, and the servitor of his pleasures; while in that atom of charcoal there is the diamond, which speaks at once of light and purity, of indestructibility, of resistless progress. For there is nothing which out-shines it. It is purer than the dew-drop. "Moth and rust" corrupt it not, nor can ordinary fires destroy it; while it cuts its way alike through brass, and adamant, and hardest steel. In that light we see an eternal progression towards omniscience; in that purity, the goodness of divine nature; in that indestructibility, an immortal existence; in that progress, a steady accession toward the home and bosom of God.—[*Hall's Journal of Health.*

EXERCISE.

How many people know that exercise is as necessary as food or sleep? There are some who understand it; but the great proportion do not. Diogenes preached exercise as the most important thing in life. All medical writers and practitioners insist upon the importance of exercise.

A few people get fat on laziness—a few only. Inactivity, as a general thing, has the contrary effect. Labor is ordained for man. Adam and his descendants are to get their bread by the sweat of their brow. It is therefore that exercise has become a necessity—because the race is accustomed to it. It is in-bred, and has become nature. The fact is not agreeable to many; neither is sickness, nor death. But these cannot be avoided. We *must* work. And he that works not should not eat, is an old maxim.

Avoid temptation, through fear you may not withstand it.

ABOUT WATER.

Left in a pail over night in a room inhabited, as is usually done, water will absorb the impurities of the air, say some of the philosophers—and it would seem to be true, if the taste has anything to do with it. It matters not if it is as cold in the morning as when brought in. If exposed to the air, there is the taste. If kept corked in a jug, the thing is different. So we are led to conclude there must be something in the theory. Water, after standing a few hours in the room, is generally "not fit to drink," and "fresh water" is the call. Let us then have fresh water, as there is plenty of it; and if we do not have it, it is a pretty sure sign some one is lazy.

Again: Bathe yourself in cold water, if a re-action follows. If not avoid it—for then it hurts the system—the shock is too great. In such a case, have your water warmer. Always have it tempered according to the capability of re-action. If very cold water gets up a glow, it shows a good, healthy body. This is the water for it.—But bathing must not be indulged in too often, as it is like taking so many grogs—it stimulates for the time being, and is good to cheer up disponding spirits. But the most of all is, the time of bathing. This is very important. When done immediately after a full meal, it is hurtful, decidedly. Every bather has experienced this unless he has a "constitution like an ox"—and even then it affects him. We have tried it to our entire satisfaction. Bathe in the morning, or just before eating during the day, say half an hour. This will prepare the system for the meal. Remember cold water stimulates, and warm water soothes. Warm water then should be resorted to to quiet the nerves, to ease distress. But for the despairing, the cold bath is equally good. For lurking pains in the system, the cold bath is a good application. The rule in all kinds of bathing is, never bathe too long, a few moments will do. This will avoid extremes in all cases. But bathing should be principally used for cleanliness, and performed as soon as possible. Once or twice a week will generally do, though the more vigorous system will admit of more. If the body is weak, bathe some one part of it first; dry, and then bathe another. This can best be done with a sponge or cloth. But do it as soon as possible. Bathing has more important influences than many people imagine—as often for evil perhaps as good. We love to see a "clean" person; but not at the expense of health.

Make no haste to be rich, if you would prosper.

WATER-PROOF BOOT SOLES.

If hot tar is applied to boot soles, it will make them water-proof. Let it be as hot as the leather will bear it without injury, applying it with a swab and drying it by the fire. The operation may be repeated two or three times during the winter, if necessary. It makes the surface of the leather quite hard, so that it wears longer, as well as keeps out the water.—[*Ex.*

Our experience is this: We had a pair of cow-hide boots made to wear in the wet. To have them more effectually secured against the wet, we applied two parts of tar to one part of rosin well mixed by heating, on both upper and under leather: the entire boots in fact were saturated. The application was made with a swab, being too warm for the fingers. The result was, the boots were perfectly water-tight—and there was no wearing out of the soles. But the uppers were spoiled. They became hard, and finally cracked, and were not fit to wear. But while they lasted—some half a year—no water had any business inside. The application killed the leather. For bottoms, we presume the tar and rosin are excellent, that is, for out-door wear.—Where rubbers are worn (for an out-door covering) we prefer the natural leather, as it is lighter and more elastic.

A Branch of Instruction.—One of the greatest evils, is the neglect, in our schools, of treatises on health. It should be made an inflexible rule that all boys and girls should learn something, whether in or out of school, in this most important branch of knowledge—how to ward off disease, and keep in good health.

How many people suffer from the insidious attack of some malady, which, had they received timely instruction, they might have avoided. We know many such cases. We have experienced it in our own person. There is no doctor so good as each man his own doctor—no drug like the drug of prevention.

Manners.—As our company is, so are our manners. They are self-formed—not by our will, but in spite of it. We gather from what surrounds us. Good manners always mean good company—bad manners, bad company.—We may learn manners in books; but they will sit on us as a fine suit on an awkward countryman who never before wore one. Manners should be natural—naturally acquired from the society we associate with, and not a thing to put on, for the unfitness will always be seen, and a man always despised for it. Hence books of etiquette should be avoided, and good society sought.

Habits of Self-Denial.—Some writer says "self-denial is the stepping-stone to success." Here is the secret why advancement is so tardy. We are so loth to deny ourselves: Yet self-denial may be made a habit—and then it will be easy. Our lives, our progress, run in grooves; and these grooves are *formed*. Habit is one of them—or rather, habit has something to do with almost every thing connected with human life. Here is a force to be acquired. Deny yourself of ease, pleasure, and devote yourself to acquirement—to the acquirement of what is amiable and profitable, and you will soon find it a second nature acquired.

Poverty.—Bulwer says that poverty is only an idea, in nine cases out of ten. Some men with ten thousand dollars a year suffer more for want of means than others with three hundred. The reason is, the richer man has artificial wants. His income is ten thousand, and by habit he spends twelve or fifteen thousand, and he suffers enough from being dunned for unpaid debts to kill a sensitive man. A man who earns a dollar a day and does not run in debt, is the happiest of the two. Very few people who have never been rich will believe this, but it is as true as God's word. There are people, of course, who are wealthy, and enjoy their wealth, but there are thousands upon thousands, with princely incomes, who never know a moment's peace, because they live above their means.—There is really more happiness in the world among working people than among those who are called rich.

When happiness comes, it generally takes us by surprise. If we seek for it, we are pretty sure to be disappointed. Great happiness—the happiness of our anticipations—we never get: it belongs not to mortals.

The love of gold is the most durable love, says Thackeray.

Heat weakens; cold strengthens. The people of warm countries, are feeble; of temperate latitudes, robust; of cold climates, fat.

A plain wife seldom disappoints: adulation has not spoiled her.

Drink no kind of intoxicating liquors.

When you retire to bed, think over what you have been doing during the day.

Never play at any game of chance.

For Burns.—Indian meal poultice, covered with the moistened leaves of green tea, and laid over burns or frozen flesh, as hot as can be borne, will give relief in a few minutes.

Domestic Department.

HOW TO MAKE TEA.—A receipt is going the rounds how to make the best cup of tea, a la Soyer, the great French eating master. It says you must heat your tea in the tea-pot before you pour on the hot water—that the whole must be done with the greatest dispatch and heat possible. We tried this, and melted the bottom out of a rare old brittania tea-pot, an heirloom. We have since tried it to no purpose, and so make tea on the old system. F. G.

HOW TO LIVE CHEAP.—Eat beans; there is something homely about this edible; but, as the ax-man said, "It has the stuff in it, it sticks to the ribs." This, with a little pork added—"pork and beans"—makes a most nutritious food. Beef is less objectionable to some stomachs. If it is necessary, this dish will serve a man without any other food; and if boiled thoroughly into a soup, will cost less than two cents a meal. H. Y.

TO WASH FLANNEL WITHOUT SHRINKING.—Make a strong suds and put in your flannel or white woolen stockings, while the water is boiling hot. Then squeeze and pound them with a pestle till the water is cool enough to put your hands to the work. You will find there is little need of rubbing. Rinse in water as hot as the hands will bear. If there is a little soap remaining in the rinsing water, it is all the better. The sooner they are dried the less they will shrink. This method, from an old housekeeper, is sure to prove just the right way, if strictly followed.

PEA CHEESE.—There is a very close resemblance between several animal and vegetable substances. Thus animal milk contains a large quantity of caseine, which is the principal substance in cheese; and peas also contain a large amount of the same substance. The Chinese, who have exhibited such an aptitude for domestic economies, that they even make soup out of birds' nests, have also found out that cheese can be made of peas. For this purpose peas are boiled into a thin paste, then passed through a sieve, and an acid added to the pea solution, which become curdled like sweet milk, by the action of the common rennet upon the latter. The solid part is then salted, pressed in cheese molds, and it gradually acquires the taste and smell of cheese. It is sold in the streets of Canton under the name of "Taofoo," and when fresh it is a favorite article of Chinese food.

DIARRHŒA.—The first, the most important, and the most indispensable item in the arrest and cure of looseness in the bowels, is absolute quietude on a bed. Nature herself always prompts this by disinclining us to locomotion. The next thing is to eat nothing but common rice, parched like coffee, and then boiled, and taken with a little salt and butter. Drink little or no liquid of any kind. Bits of ice may be eaten and swallowed at will. Every step taken in diarrhœa, every spoonful of liquid only aggravates the disease. If locomotion is compulsory, the misfortune of the necessity may be lessened by having a stout piece of woolen flannel bound tightly round the abdomen, so as to be doubled in front, and kept well in its place.

A HEALTHY DRINK.—The following is highly recommended as a spring and summer drink to keep the system in order—dose from one-half to a cupful once or twice a day.

One pound of sarsaparilla; twelve ounces wild cherry bark; six ounces liquorice root; one ounce gentian; one ounce mandrak root; one teaspoonful cinnamon; half do. red pepper. Simmer the whole in six gallons water till it is reduced one-half—then strain and bottle it.

HOW TO MAKE A CHICKEN PIE.—1. I take two common sized chickens—old ones will answer which are not good to roast—put them in a pot with plenty of water, some salt, and boil until tender, but not too much. Then make a crust as you would for biscuit.—I use cream and think it the best. Roll about one-fourth an inch thick, and line the sides of a six quart pan with the crust, then dip in a layer of chicken, season with butter, pepper and salt to suit the taste. Then roll a top crust large enough to cover the pan: put it into the oven, and bake moderately for an hour and a half, and you will have chicken pie enough for a dozen persons.

2. Boil the fowls until tender; prepare a crust of buttermilk and cream, in the same manner as for soft biscuit; line your baking dish with a portion of it, then break the fowls in pieces and place the portions around in the pie. Put in some lumps of butter, then put in the liquid in which the fowls were boiled, until the pan is two-thirds full. It should be seasoned to the taste before putting in, but not have any thickening in, or it will dry away to much. Roll out and wet the edge where the crust comes together. Make a hole in the top to let out the steam. Bake it moderately. At least two fowls will be necessary for a large pie.

DIRECTIONS FOR MAKING YEAST.—To make yeast: Take two handsful of hops, three pints of water, six potatoes, and boil them all until the potatoes are soft; then pare them, mash through a colander and strain the liquid. Put it in your preserving kettle over the fire, and add one cup of sugar, one tablespoonful of salt and one of ginger; add flour enough to make it of the consistency of paste, and then let it boil five minutes, stirring it all the time. Turn out, and when partially cool add half a pint of good yeast. Let this stand till fermentation takes place, and the job is done. In the winter I keep it in a stone jar in the cellar; but in the summer I dry it by mixing it with corn meal, and spreading it on the table exposed to the air, (not sun).

PLUM PUDDING WITHOUT EGGS.—One cup of molasses, one cup of milk, one pound of raisins, chopped, one teaspoonful of soda, one do. of powdered cloves. Mix with flour about as stiff as pound cake. Melt half a cup of butter and stir it in. Steam in a dish over boiling water four hours, and eat with a hot sauce.

VALUABLE DISINFECTANT.—One pound of green copperas, sulphuret of iron, costing eight cents, dissolved in one quart of water, and poured down a privy, will effectually concentrate and destroy the foulest smells. For water-closets aboard ships and steamboats, about hotels and other public places, there is nothing so nice to cleanse places as simple green copperas dissolved under the bed, in anything that will hold water, and thus render a hospital or other places for the sick, free from unpleasant smells. For butcher stalls, fish markets, slaughter houses, sinks, and wherever there are offensive putrid gases, dissolve copperas and sprinkle it about, and in a few days the smells will pass away. If a cat, rat or mouse died about the house, and sends forth an offensive gas, place some dissolved copperas in an open vessel, near the place where the nuisance is, and it will soon purify the atmosphere.

CURE FOR NEURALGIA.—Half a drachm of sal ammoniac in an ounce of camphor water; to be taken a teaspoonful at a dose, and the dose repeated at intervals of five minutes if the pain be not relieved at once. This is believed the most effectual remedy ever discovered for this most painful malady.

A ham has an excellent flavor boiled as follows:—Preparatory to cooking, soak it well in vinegar and water; then boil in water with some heads of celery, two or three turnips, five or six onions, and a handful of sweet herbs. Put the ham in cold water, and allow it to heat very gradually. One of sixteen pounds will require four and a half hours boiling.

Editor's Table.

SORGHO! TOBACCO! COTTON!

Particular directions will be given in the "Valley Farmer" for the present year on the Cultivation of Sorgho, Tobacco and Cotton. In our next number we shall have valuable articles on the Culture of Tobacco and Cotton, and we shall continue to publish articles on all these subjects throughout the year. Our journal being published in a more southern latitude than any other agricultural paper in the United States and consequently in a more favorable climate for these crops, we shall give them particular attention throughout the year.—Will our readers call the attention of their neighbors to these facts and induce them to subscribe. Wherever clubs have been already formed additions can be made at club rates.

OUR PROSPECTS.

We are happy to say that our subscription list was never increasing more rapidly than it is at the present time. Our friends are forming clubs all over the broad and productive West. Our journal being the only one published in this latitude it is very natural that it should receive the support of the farming population. Journals published in the North although of the highest excellence in a northern climate are not entirely adapted to our own climate and productions. Many farmers have discarded Agricultural Journals for this reason. The "Valley Farmer" endeavors to adapt its teaching to our peculiar climate, soil, crops and fruits. For this reason it is more valuable to the farmer here. And this is doubtless the secret of our increased and growing circulation. We intend that the "Farmer" for 1863 shall be far ahead of what it ever has been before. Look at the present number.—See what a variety of articles. Is not this number of itself worth a year's subscription. And yet each number through the year we intend shall surpass this.

CEDARS FROM THE WOODS.

O. D. Stinson, of Lincoln, Kansas, asks us if the common Red Cedar can be transplanted from the woods into yards, &c., and be made to live, and wants to know how it should be done, as he has had no success. We have transplanted thousands of Cedars from the woods, not losing one in fifty. We always prefer a rainy day to go to the woods to take up the plants; the roots are then kept moist, and this is very important. If the roots are permitted to become dry the plants will not live. Another very important matter is to dig only small trees, say from one foot to two and a half feet high, branching to the ground. Large trees cannot be successfully transplanted. Take up as much of the roots as possible. It is better to transplant them into the garden for one or two years in well cultivated soil, and there they will form an abundance of fibrous roots. If put into the front yard immediately, spade up the ground for six or eight feet in diameter, and two feet deep; or what is better, make a circular border or bed large enough to plant in five or six trees, and thoroughly spade and work that, and keep the soil mellow by working through the summer. Make a number of such beds in your front yard, and in a few years you will be proud of your trees. Group your trees as well as you can in these beds. Don't put them in straight lines. If you want your trees to grow well don't plant them in the sod as you would a post; they will certainly die if you do. The best time for transplanting is in April. Another piece of advice. Don't prune up an Evergreen as you would an apple tree; never cut off a limb. Let it branch from the very ground if it will.

Our Agricultural Exchanges.

Many of our readers may wish to patronize other Agricultural Journals, and we give a list of those which are published in the United States. Many of our agricultural papers have been unable to withstand the effects of the rebellion and the enormous price for paper, yet we believe those in the following list are all doing well and will weather the storm. We wish them all a year of prosperity, for we believe no journalists are doing the country so much good. Many have been compelled to advance their subscription price and also diminish their dimensions, but they all remain sufficiently large. It is not the quantity of matter, but the quality that is needed.

Rural New Yorker (weekly), Rochester, N.Y. $2.
Maine Farmer, do., Augusta, Me., $2.
New England Farmer, do., Boston, Mass, $2.
Boston Cultivator, do., Boston, Mass., $2.
Mass. Plowman, do., Boston, Mass., $2.
Hovey's Mag. of Horticulture (monthly), Boston, $2.
N. H. Journal of Agriculture (weekly), Manchester, N. H., $1. 50.
American Agriculturist, do., New York, $1.
Working Farmer, do., New York, $1.
Horticulturist, do., New York, $2.
Farmer and Gardener, do., Phila. Pa., $1.
The Gardener's Monthly, Phila. Pa., $1.
Country Gentleman (weekly), Albany, N.Y., $2.
Genesee Farmer (monthly), Rochester, N.Y., 50c.
Ohio Farmer (weekly), Cleveland, Ohio, $2.
Michigan Farmer (monthly), Detroit, Mich., $1.
Prairie Farmer (weekly), Chicago, Ill., $2.
Illinois Farmer (monthly), Springfield, Ill., $1.
Wisconsin Farmer (monthly), Madison, Wis., $1.
Iowa Homestead (weekly), Des Moines, Iowa, $2.
Calafornia Farmer do., San Francisco, Cal., $4.
Canadian Agriculturist (monthly), Toronto, C. W., $1.

☞ Fred. Will, Hopewell Furnace, Mo., wants to purchase a Chester White sow and some Cotswold sheep. Those having them to sell will write him.

AGENTS WANTED.

Having a very large stock of Fruit and Ornamental Trees and Shrubs, Small Fruits, Grape Vines, &c. of the very best quality to dispose of, the present spring, I would be glad to secure the services of some good reliable local and general agents. NORMAN J. COLMAN.

BABCOCK & BRO.—We made a short visit to the St. Clair Nurseries, at Summerfield, Ills. (Babcock & Bro. Proprietors,) a few days since, and found that our friends had a large stock of trees for sale, for spring planting. They have a large Nursery and seem to be driving a prosperous business.

Godey for February.—This charming Lady's Book is always promptly on hand, filled with the choicest reading and the most beautiful engravings. The husband cannot bestow a more charming present to his wife, or the lover to his sweet-heart. Early every month it will be received, and many a happy hour will be spent in perusing it. Subscribe for it for your lady friends. One copy, one year, $3; two copies, $5; three copies, $6. Address L. A. Godey, Philadelphia, Pa.

The American Annual Cyclopedia and Register of Important Events of the Year 1861.

Embracing Political, Civil, Military, and Social Affairs; Public Documents, Biography, Statistics, Commerce, Finance, Literature, Science, Agriculture and Mechanical Industry.

We extract the following from the Preface:

"In preparing a Cyclopedia of what came to pass during the year 1861, the political and Military events appeared to possess a greater importance than all that had been developed in the different branches of knowledge. The interest which they awakened, soon became so strong and engrossing that the peaceful pursuits of industry were paralyzed, trade and commerce languished, the student of science forsook his quiet seclusion for the tented field, and the inventive genius turned to find more skilful weapons for conflict or terrible engines for destruction. The consequences involved in these events are regarded as destined to exert a permanent influence on mankind. Whether constitutional liberty can survive the violence of human passions; whether institutions organized to preserve and protect the rights of men, and which depend for their existence upon the will and pleasure of those whom they control, can withstand the shocks of military power, are questions in which the welfare of all is at issue. The conflict, therefore, in the United States, forms an important part of this volume. It embraces the political principles involved, with the arguments of their respective advocates and opponents; the movements of the leaders of secession, from their first acts to the close of the year, including the proceedings, step by step, in each of the Southern States, until they had resolved themselves out of the Union, and their subsequent efforts; the organization of the Confederate States; the principles upon which that organization was founded; the civil and commercial regulations of the Confederacy; the movements of its Government to fill its treasury, and organize and equip vast armies; the counteracting movements of the United States; the organization of its armies, with the details of the weapons for the infantry and artillery, and for the batteries of the ships and gunboats; together with all the original documents, from the Messages of the respective Presidents; the instructions of Cabinet officers; the Messages and proclamations of Governors; the important acts of the United States and Confederate Congresses; the acts and resolutions of State Legislatures; the proclamations and orders of commanding officers; the contributions of men and money from each State, North and South; the details of every battle and every skirmish involving a loss of life. So ample have been the resources from which its details have been prepared, comprising publications both North and South, that it is believed no important public measure of the Federal or Confederate Governments, or of any of the States, has been overlooked or valuable document omitted. The efforts of the Confederacy to secure the co-operation of foreign powers, and of the United States to prevent it, are summarily presented in the letters and instructions of the respective diplomatic agents."

Further extracts from the Preface are here omitted.

The developments of science during the year, as presented in this volume, were of much interest, especially in relation to agriculture. The geographical explorations; the ingenious and important inventions in mechanical industry, with illustrations; the commerce, and the stupendous military, naval, and financial resources of the United States, brought out by her difficulties during the year; and biographical notices of the virtues and services of the distinguished men who closed their career in 1861, form also an extensive portion of the volume.

The form of a Cyclopedia has been selected, as affording room for the greatest variety of details, without becoming too minute and tedious. The work is now ready. The volume is in the style of the New American Cyclopedia, having not less than 780 pages, royal 8vo.

The work is sold exclusively by subscription, and in exterior appearance is at once elegant and substantial.

Prices and Styles of Binding.—In Cloth, $3; in Library style, leather, $3,50; in half Morocco, plain, $4; in half Russia, extra, $4,50; payable on delivery.

And to insure a uniform price and regularity in the delivery of the volume to subscribers in all parts of the country, local agents will be appointed in all the cities and principal towns in the States and Territories

Orders may be addressed to us, or to Kile & Co., 64 Third St., opp. P.O., St. Louis, our Agents, for the above, or any of our Subscription Works, and will meet with prompt attention. D. Appleton & Co., Publishers, 443 and 445 Broadway, New York.

Grape Culture and Wine Making.—Our friend J. M. Jordan, of St. Louis, will accept our thanks for a volume of this valuable work. We have not yet examined it, but believe it be an excellent treatise on Grape Culture. He can supply copies at $1; by mail $1.20.

The City University.—We invite the attention of our patrons to this Institution for education. Parents having children to educate, cannot find a better Institution. "Excelsior" seems to be Mr. Wyman's motto. He engages the affections and interest of his pupils and they advance as we never saw students advance before. Yet they clearly understand every thing as they advance. This is a matter of the highest importance. Having patronized this Institution we speak of what we do know.

GARDEN SEEDS.—The attention of Farmers, Gardeners and Dealers is invited to my complete assortment of choice and reliable Garden, Field, Tree and Bird seeds. Catalogues furnished on application.

Also, Farm and Garden Implements and Fertilizers of every variety. Plants, Trees, Roots, &c.

For sale at low prices. John Vanderbilt.
feb2t) 23 Fulton St. New York.

AGENTS WANTED.

WE wish a number of good reliable men to sell Fruit and Ornamental Trees, Shrubs, Green House, and Bedding Out Plants, &c. from our Nurseries. Will also furnish Tree dealers at low wholesale rates. Send and get Catalogue and price list. Lenk & Co.
febtf) Humboldt Nurseries, Toledo, O.

FOR SALE.

50,000 SELECTED Apple Stocks, @$3 per 1000.
Lenk & Co., Humboldt Nurseries, Toledo, O. (febtf

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HERMANN NURSERY.

HUSMANN & MANWARING, Proprietors,

HERMANN, MO.

Having much increased our business, we take pleasure in calling the attention of our friends, and the public generally, to our large and complete assortment of Fruit and Ornamental Trees and Shrubs, comprising the choicest varieties of

Apples, Pears, standard and dwarf; Cherries, standard and dwarf; Peaches, Plums, Apricots, Almonds, Quinces, Grapes, Currants, Gooseberries, Raspberries, Strawberries, Blackberries, Shade and Ornamental Trees and Shrubs, Evergreens, Vines, and Creepers, Roses, Dahlias, and other plants, Scions of Fruit Trees, Cuttings and Seedlings of Ornamental Trees, Shrubs, &c.

Most of the varieties were tested here and have proved successful in our soil and climate, and all are warranted true to name.

We would call the special attention of Grape Growers to our large assortment of native hardy grapes, comprising over sixty of the choicest varieties, which we have spared no pains nor cost to procure from the most reliable sources. Many of them have been tested here, and all will be tested in the open vineyard, and we shall recommend none until we have found them successful. This we may now confidently do with Norton's Virginia, Herbemont, Missouri and Concord, they having been tested beyond a doubt.

Descriptive Catalogues sent gratis to all applicants.

Orders directed to us personally, or to our local agents, will be promptly and carefully filled.

HUSMANN & MANWARING.

Hermann, Sept. 1859-tf.

Grapes, Strawberries, and other Plants, for 1863.

We are now prepared to receive orders for any quantity of the following plants raised by trustworthy growers:

Delaware and Concord Grapes.
True Lawton Blackberries.
Doolittle's Black Cap Raspberries.
Triomphe de Gand Strawberries.
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Victoria Rhubarb, Giant Asparagus.

☞ Prices to suit the times—send for Circulars.

We shall also be ready in the season to fill orders for the following PLANTS, well tied up and packed for shipping by express or otherwise.

Nansemond Sweet Potato Plants.
Early and Late Cabbage, Cauliflower,
Celery, Egg Plant, Pepper and
Tomato Plants.

Feb. 1, 1863. **PLANT & BROTHER**, St. Louis, Mo.
[feb2t]

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The Proprietors of this old established nursery invite the attention of Fruit Growers, Nurserymen and Dealers, to their extensive stock of TREES and PLANTS, grown upon a clay and loam of upon land embracing over 300 acres, consisting largely of Standard and Dwarf Pears, Standard and Dwarf Cherry, Standard and Dwarf Apple, Plums, Peaches and Apricots. Grape Vines, consisting largely of Concord, Delaware, Cuyhaoga, Rebecca, Union Village, Hartford Prolific, and all other well-approved sorts.—Strawberry plants, consisting largely of the Triomphe de Gand, the best Strawberry known. Also, Wilson's Albany, Fillmore, Large Early Scarlet, and other good sorts. All plants warranted of the best quality and true to name.

A large stock of Norway Spruce and other Evergreens of all sizes, cheap; Shrubs, Roses, and Greenhouse plants.

Raspberry plants, of Doolittle, Franconia, Brinckle's Orange and Everbearing Sorts.

Also, 50,000 Horse Plum Seedlings, size for budding.

Address, W. T. & E. SMITH, Geneva, N.Y.

☞ Catalogues furnished. [feb2t

PLANT TREES.

Woodburn Nursery.

All persons designing to plant Fruit Trees the coming spring, are invited to correspond with the proprietor of the above-named Nursery, and obtain a Catalogue, or, what is better, call and examine trees and prices before purchasing elsewhere. I offer a large stock of APPLE TREES, 2, 4 and 5 years old. Also, ORNAMENTAL AND TIMBER TREES, EVERGREENS, SHRUBS, PIE PLANT, &C.

Agents wanted. Catalogues free. J. HUGGINS,
3tjan] Woodburn, Macoupin Co., Ill., Jan. 1, '63.

FLOWER SEEDS FOR 1863.

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